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Leo Conti | Mark Easton | Geraldine Carrodus
Joanne Wilson | Richard Smith | Annie Wilson

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Leo Conti | Mark Easton | Geraldine Carrodus
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Commonwealth of Australia Constitution Act.

AN ACT

to

Constitute the Commonwealth of Australia.

Cap 12

9th July 1900

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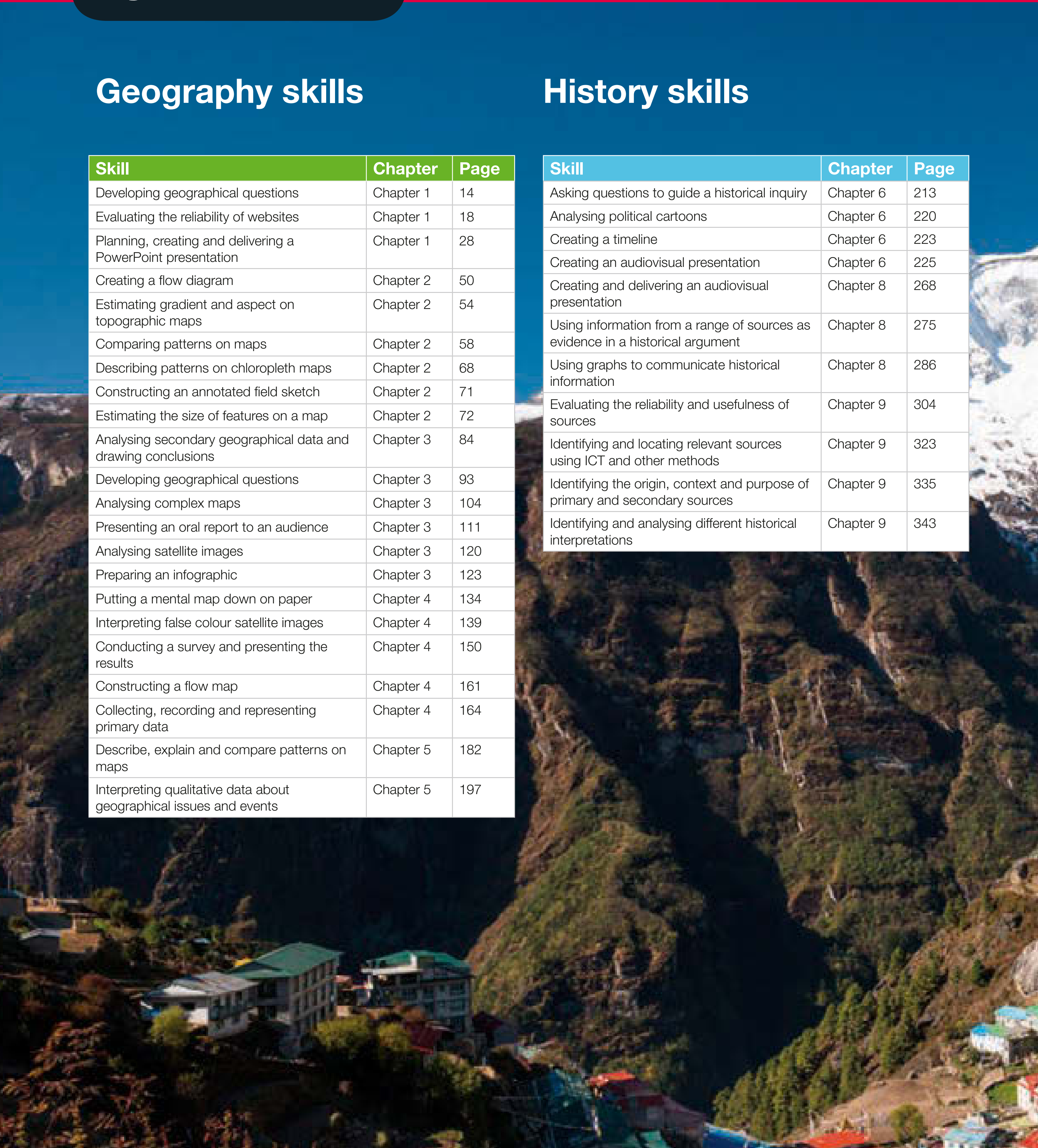

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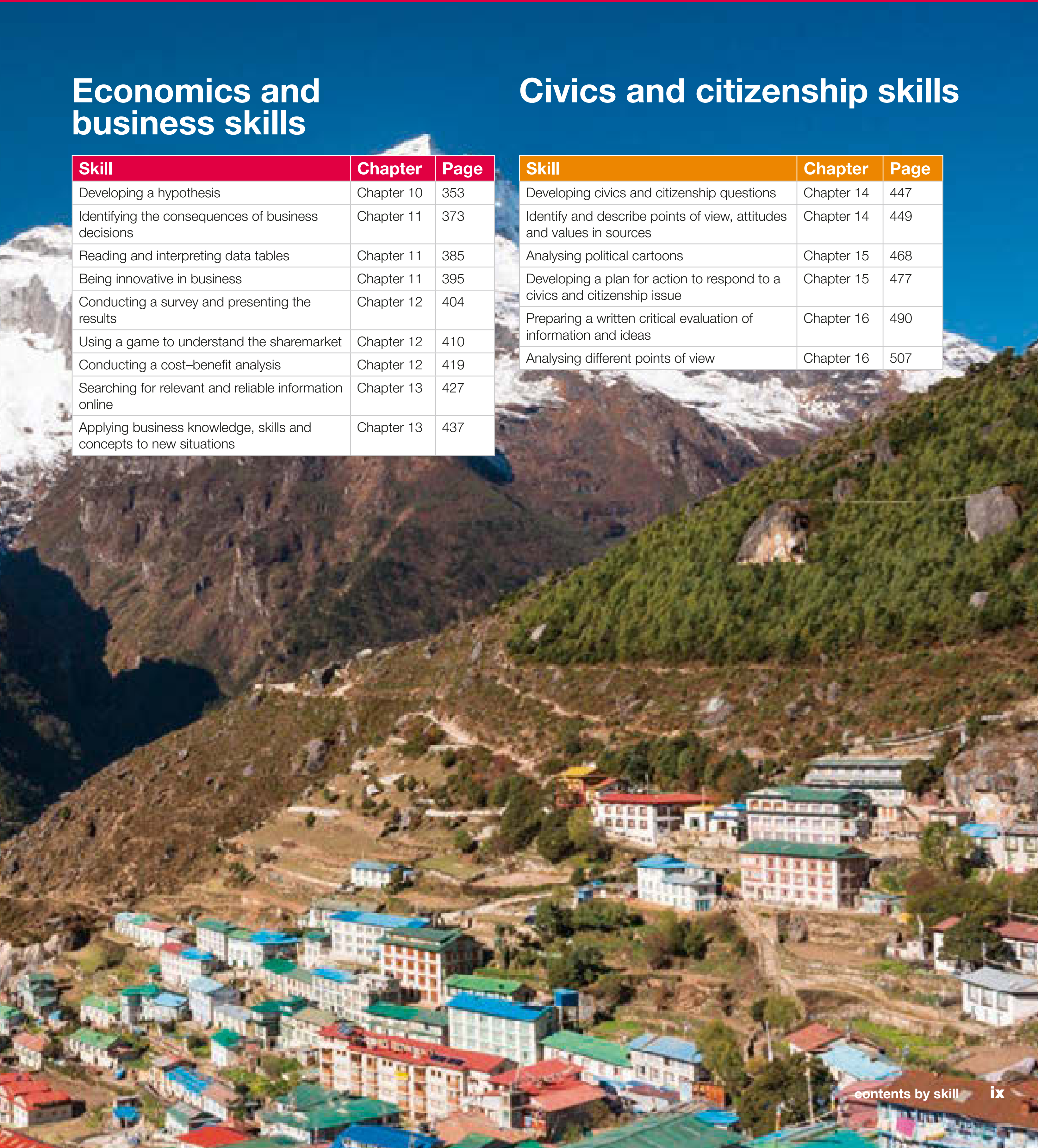

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Using *Oxford Big Ideas Humanities and Social Sciences*

Oxford Big Ideas Humanities and Social Sciences is a brand-new series developed and written to provide complete coverage of the Western Australian Curriculum: Humanities and Social Sciences – Geography, History, Economics and Business, and Civics and Citizenship – across Years 7–10.

Focus on inquiry

Each chapter of *Oxford Big Ideas Humanities and Social Sciences* is structured around key inquiry questions from the Western Australian Curriculum. Each unit of the text supports teachers and students as they adopt an inquiry-based approach to the key learning areas in the Humanities and Social Sciences.

The learning sequence in each chapter is clearly set out under key inquiry questions. Students are encouraged to use their prior knowledge and make predictions at the start of each new topic.

Geographies of interconnection
2
2A
2B
2C

Stunning full-colour photography generates discussion and interest.

Focus on engagement

Each unit of the Student book combines a range of engaging source materials – such as photographs, videos, data tables, graphs and illustrations – with supporting questions and activities.

Source materials – such as photographs, infographics, political cartoons, graphs – simplify difficult concepts and engage reluctant learners.

2.4 The tropical forest biome
The gifts of the rainfo
2A What are biomes?

7B What were the key events of World War I?

7.4 The significance of World War I

World War I left Europe devastated. In January 1919, the victorious nations met at the Paris Peace Conference in France to come up with a plan for rebuilding Europe and ensuring peace in the future. After months of negotiations, the **Treaty of Versailles** was signed on 28 June 1919. This document officially ended World War I and forced Germany to accept responsibility for starting the conflict. It also ordered Germany to pay **reparations** to the Allied Powers.

As a result of the war, the map of Europe was redrawn. Four major European empires – the Austria–Hungary Empire, the Russian Empire, the German Empire and the Ottoman Empire – were broken up and a number of new countries were created in their place. The ruling monarchies of these empires all lost power. The Russian Tsar was overthrown by a communist revolution in 1917; Austria–Hungary was broken up into a number of newly formed states including Yugoslavia and Czechoslovakia; and Turkey emerged as a modern, secular republic after the break-up of the Ottoman Empire.

However, World War I was not only a historically significant event in Europe. Far way in Australia, the events and experiences of the war had major effects on our nation's society and relationships with other countries. Australia had become a nation after Federation in 1901. Unlike many other countries, such as the United States and France, the founding of the Australian nation was achieved without the need for revolution. Instead, the Australian people created a nation founded on the principles of modern democracy through peaceful means. The events of World War I, such as the ill-fated invasion of the Gallipoli Peninsula in 1915, are often described as our 'coming of age' as a nation and our 'baptism of blood'. In many ways, World War I provided an opportunity to create a national story that expressed our national character and identity.

Source 1 A parade of Australian soldiers at the trenches on the Western Front, following capture of Pozières on 23 July 1916

An overview of the significance of the wars to Australia

Impact of the wars on returned soldiers and civilians	Topic 9.18	• Over 300 000 Australians served overseas during World War I, with around a quarter of a million servicemen returning to Australia at the end of the war. Many returned with physical or psychological injuries. Their care and families' financial responsibilities fell on women in the community. The government established a Repatriation Department in 1917 to provide health, compensation, housing and job training for veterans.
Commemorating the war	Topic 9.18	• Commemoration services on Anzac Day and Remembrance Day both linked to World War I • Aspects of commemoration services still linked to World War I
Different perspectives on the Anzac legend	Topic 9.17	• The birth of the Anzac legend and its significance today • Differing perspectives on the place of Gallipoli in defining Australia's national identity • Differing views on what Australia should most celebrate

Source 1 An Anzac Day parade, commemorating Australian soldiers who fought in World War I and all wars since

Check your learning 7.4

Remember and understand

1 What European empires disappeared after World War I?
2 Why do so many Australians regard the Gallipoli campaign as a significant event?
3 What is the Treaty of Versailles?

Apply and analyse

4 Why do you think the Gallipoli campaign has been described as Australia's 'coming of age' and 'baptism of blood'? Do you think these descriptions are accurate? Justify your response.

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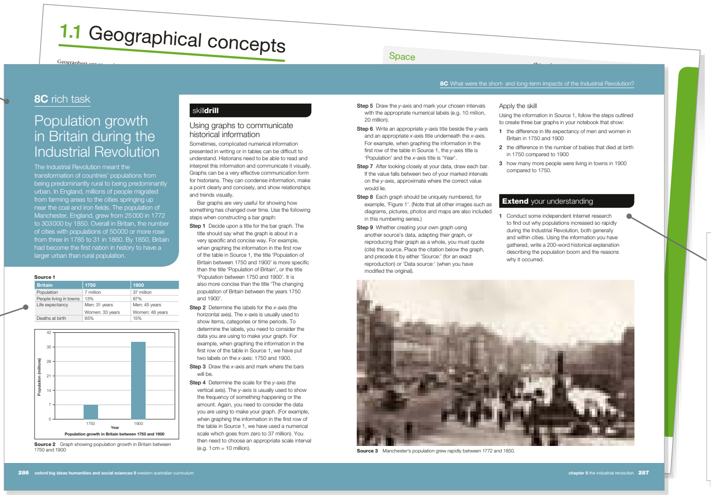
Check your learning activities accompany every unit, allowing students to consolidate and extend their understanding. These are graded according to Bloom's Taxonomy – catering for a range of abilities and learning styles.

Focus on concepts and skills

Complete coverage of all concepts and skills provided in stand-alone reference 'toolkits'. All of these concepts and skills are also integrated throughout the text so students can see them at work in context.

Rich task activities encourage students to apply the knowledge and skills they have learned in each chapter to a new and interesting case study, event or issue.

Skill drill activities guide and support students step by step as they learn and apply key skills.



1.1 Geographical concepts

8C rich task

Population growth in Britain during the Industrial Revolution

Extend your understanding activities challenge students to conduct further research, or complete group work, to deepen their understanding of an issue or skill being investigated.

Digital support

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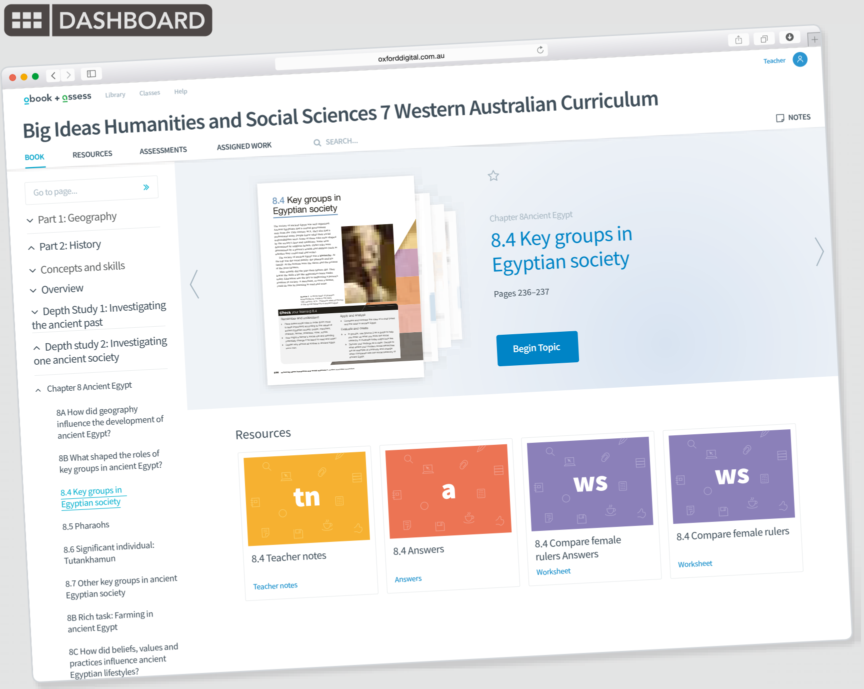

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geography

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Concepts and skills

The geography toolkit

Geography is the study of the places that make up the world around us. Geographers are interested in how human activities and natural processes change the Earth's places, as well as the links between these places. More than ever before, geographers help other people understand how change affects people and places and how this change can be managed.

Geographers have a sense of wonder and curiosity about the world and this leads them to ask questions about what they see and experience.

Geographers use a range of key concepts and skills to answer such questions. Each of these concepts and skills is a tool that you can use to better understand your world. As you master each of these concepts and skills you will gradually fill your toolkit with a range of useful geographical tools. These will help you better understand this amazing planet.

1A

What are the geographical concepts?

1B

What are the geographical skills?

chapter 1

Source 1 Mount Kilimanjaro, Africa's highest peak

1C

What is fieldwork?

1D

What are the career opportunities for geographers?

1.1 Geographical concepts

Geographers use seven key concepts to help investigate and understand the world. These concepts provide a framework for thinking geographically and will help guide you through every geographical inquiry. At times you will use several of these concepts at once, while at other times you may focus on just one. The seven key concepts in geography are:

- **place**
- **space**
- **environment**
- **interconnection**
- **sustainability**
- **change**
- **scale**.

Place

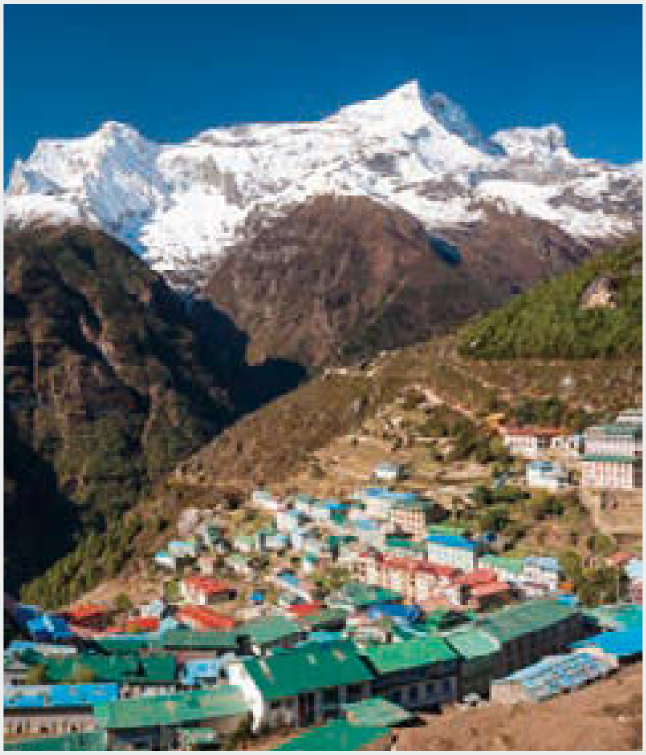
A place is a part of the Earth's surface that is identified and given meaning by people. For example, the Serengeti – which is a vast ecosystem in Africa – is a place. It is famous for its enormous plains filled with a range of wildlife. Places aren't defined by size, however. They can be very large, like a whole continent, or small, like a corner of a library. Your home and school are important places for you, because they are places where you live and spend a lot of time.

Places can be natural (that is, shaped by the environment and largely unchanged by humans), or built (that is, constructed by humans). Each place is unique, with its own set of characteristics.

The life of every person and animal on Earth is influenced by place. Places determine our relationships with one another. Our closest relationships are likely to be with people in places that are physically near. The environmental and social qualities of a place all influence the way we live. Climate, landscapes, types of plants and resources, transport networks, entertainment venues and workplaces all have a major impact on our daily lives.

Geographers use the concept of place when they investigate what a place is like, and when they look for explanations for what they see. For example, a geographer visiting Namche Bazaar near Mount Everest (see Source 1) would be interested in the forces that have shaped these mountains.

They would look for clues and begin to ask questions, much like a detective. Why are the sides of the mountains so steep? Why are the highest mountain peaks in a line? Why are there stripes in the mountain peaks? By seeking answers to these questions the geographer is aiming to explain, not just describe, a place.



Source 1 The town of Namche Bazaar lies at the base of Mount Everest.

Geographers use the concept of place when conducting any geographical inquiry. For example, a geographer visiting Namche Bazaar would use the concept of place to help understand why people choose to live in this challenging environment and how they overcome these challenges. They would also investigate the ways people have altered this environment, and assess the environmental and social impacts of these changes.

Space

To most people, space means the empty universe, but to a geographer it has a different meaning. Geographers use the key concept of space when investigating the way that things are arranged on the Earth's surface. They also investigate the ways people use and change the spaces in which they live.

Geographers look for patterns in the way features and structures are arranged, and the concept of space helps them to do this. It has three main elements:

- **location** – where things are located on the Earth's surface
- **organisation** – how and why things are arranged and managed on the Earth's surface by people
- **spatial distribution** – the shapes and patterns in which things are arranged on the Earth's surface.

At first, you may find you confuse the concepts of place and space, as people often use the words interchangeably. To a geographer, however, the concepts of place and space are quite separate. It may help you to remember that places can be divided and organised into spaces. Spaces also are assigned with different purposes.

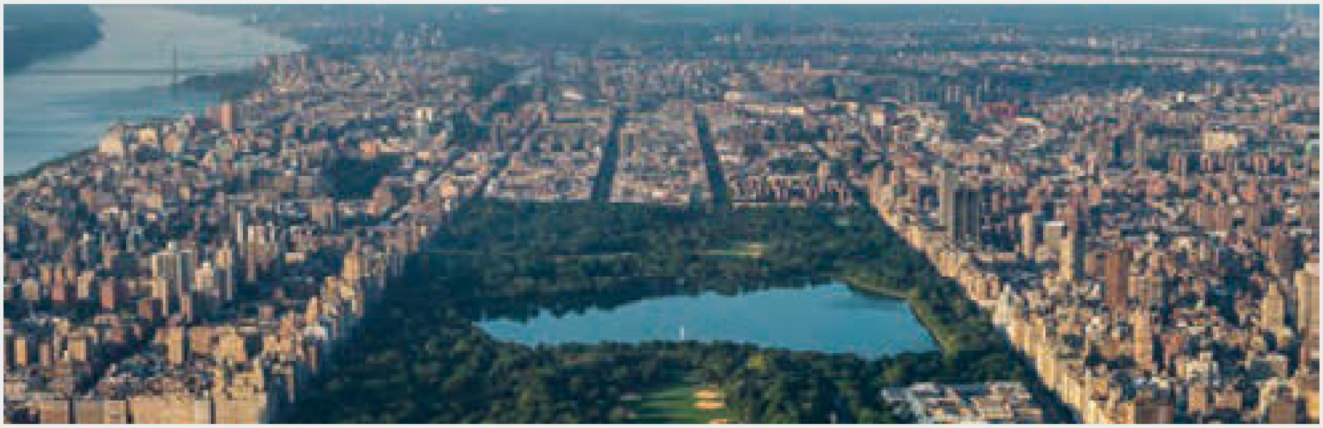
For example, a place like your school is organised into different spaces, each with its own purpose. There are spaces for learning, spaces for sports and spaces to eat. Larger places, such as your suburb, town or city, are also organised into different spaces. There are spaces for housing, spaces for businesses, and spaces for sports and entertainment – all with their own function.

Understanding of the location, patterns and planning of spaces helps geographers to make sense of our world. Geographers would look at a photograph like this one of New York City (see Source 2) and might examine it by using the key concept of space in the following terms:

- location – they would observe that Manhattan Island is located in the mouth of the Hudson River and that land is limited. Clearly, there is an open space in the centre of the city. Geographers might identify that it has been designated as a space for recreation and enjoying nature. They may ask questions like, How big is the park? When was it established?
- organisation – they would conclude that there are many tall buildings in a confined area. Were the buildings constructed around a set perimeter, after the park was established? Are the buildings mainly used for business or housing purposes?
- spatial distribution – geographers may investigate how many buildings there are per square kilometre, how sparsely or densely they are situated from each other, and how sparsely or densely they are populated.

Further investigation would reveal that there is a complex network of bridges, ferries, subways and walkways that link the island to surrounding areas. In fact, Manhattan Island in New York is one of the most densely populated places on Earth, with more than 26 000 people living in every square kilometre! New Yorkers would perceive and use the space around them in quite a different way from someone living on a huge block in an outer suburban area.

Geographers also investigate the ways that people use and change the space in which they live. They recognise that different groups of people use space in different ways and that this changes over time. By examining, researching and describing how spaces are used, geographers can further our understanding of the world and help manage it into the future.



Source 2 Manhattan Island in New York is one of the most densely populated places on Earth.

Environment

In geographical terms, the key concept of environment means the living and non-living components and elements that make up an area, and the ways they are organised into a system.

Geographers are interested in investigating and describing the relationships between people and the environment. In particular they examine:

- the ways in which different groups of people perceive and use the natural environment and why these perceptions differ
- the ways in which people change the environment and how these changes can be managed
- the impact of environmental hazards on people and how the impacts of these hazards can be reduced.

The world in which we live is made up of many different environments. Some environments are natural (or physical) such as deserts, **grasslands**, mountains, coral reefs, forests, oceans and ice caps. The natural environment provides us with basic resources for living such as food, water and clean air. Natural processes such as **tectonic plate** movement, **erosion** and weathering have formed these environments over millions of years. In order for an environment to be considered natural its soils, rocks, climate, plants and animals must remain largely untouched by humans. Today there are very few natural environments left on Earth.

Other environments have been so changed by humans – largely for settlement and economic activity – that very few natural features remain. These are known as built (or human) environments and include large cities, towns, suburbs and areas of farmland. For example, mountainous land in the Philippines has been transformed into terraced pond fields for rice farming by skilfully following the natural contours of the land.

Researching an environment also allows geographers to evaluate how people can best interconnect with that environment, and identify potential risks for people interacting with that environment. For example, examining the landscape and height, as well as the ascent routes of Mount Kilimanjaro (see Source 3) in Tanzania allows prospective travellers to know that, unlike with Mount Everest, they don't need to bring additional oxygen for their climb, but they do need to follow one of six official routes.

Interconnection

Nothing on Earth exists in isolation. All environments and every living and non-living thing are connected. Geographers use this concept of interconnection to better understand the links between places and people, and how these interconnections affect the environment and the way we live. These connections can be on a local level or a global level.

Source 3
Mount Kilimanjaro in Africa is a popular place for climbers to interact with the natural environment.

Source 4 Container ships berth at the Port of Fremantle.

Natural processes link places and people. For example, the water cycle links the water in the oceans with the land. When it brings rain to inland areas, water flows across the land and into rivers and streams. Farmers rely on this natural link to provide the water they need to grow food.

Links between places and people can affect the way people live. In turn, the way people live can affect places. A relatively small change in one area can have a great impact on another it is connected with. The melting of ice from a glacier at the top of a mountain, for example, will affect the land at the bottom of the mountain. The extra water could potentially damage crops that are being grown there, or the changed conditions may benefit farmers.

Human activities such as the movement of people, the use of the Internet, the production and trade of goods, and the flow of money within and between different countries also link places and people.

The Port of Fremantle is Western Australia's main port for trade with other countries (see Source 4). The ships that pass through here and the goods they carry link dozens of countries around the world.

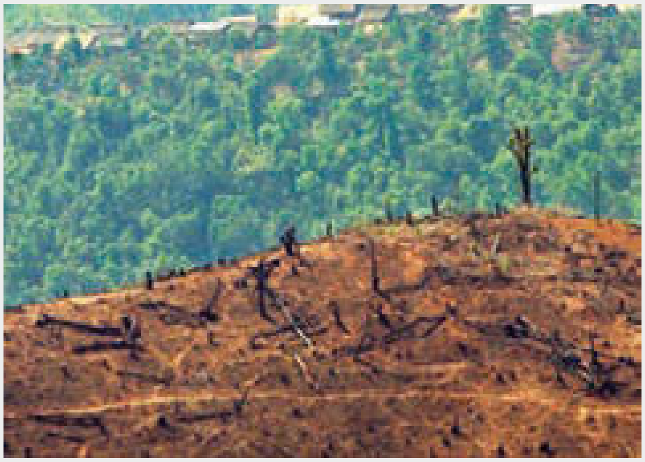
Sustainability

The concept of sustainability relates to the ongoing capacity of the Earth to maintain all life. This means developing ways to ensure the Earth's resources be used and managed responsibly so they can be maintained for future generations.

Sustainable patterns of living meet the needs of the current generations without compromising the ability of future generations to meet their own needs. Many of the world's resources (such as oil, coal and natural gas) are non-renewable. This means that if we continue to use them they will one day run out. Other resources (such as wind, forests, solar and water) are renewable. This means that they replace themselves naturally, or can be replaced to meet the needs of society. Sustainability encourages us to look more closely at renewable options and take greater care of the Earth. Actions to improve sustainability can operate at a number of levels:

- local – recycling of paper by individuals, schools and households reduces the number of trees that need to be cut down
- national – in Australia, the government has begun to encourage sustainable use of energy by offering incentives to promote the use of solar panels
- international – organisations such as the Marine Stewardship Council (MSC) are working with fisheries and retailers to promote responsible and environmentally viable fishing practices around the world.

There can be debate surrounding the sustainability of an environment, as people or organisations with different interests may put forward different points of view. A tree-logging company may protest that their practices are sustainable because they re-plant as much as they cut down. On the other hand, a conservation group may be equally convinced that a forest cannot be sustained when its trees are cut down. New trees may take decades to grow, in which time the ecosystem will have been altered. Many underdeveloped countries, such as Myanmar (Burma) (see Source 5), face enormous challenges controlling and monitoring forest clearance.



Source 5 Logging in Myanmar (Burma) gives local communities a source of income but leaves hillsides bare and easily eroded by heavy rain.

Change

The Earth is constantly changing. Some changes occur very rapidly and are easy to observe, while others take place over millions of years and are almost undetectable to us.

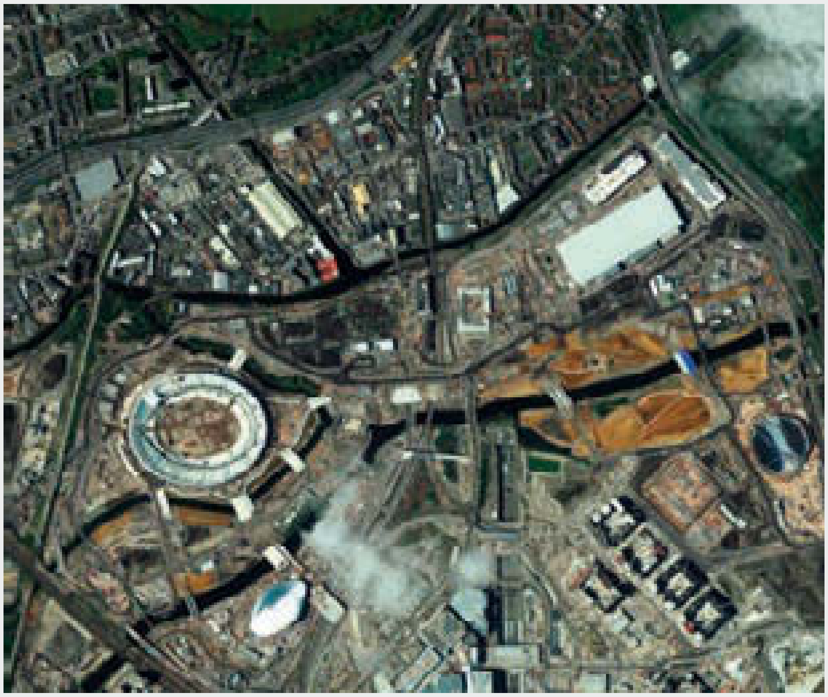
The concept of change is important in geography because it helps us to understand what is happening around us and to see the world as a dynamic place. Change in both time and space allows geographers to examine how environments develop, transform or disappear.

Change can be the result of natural forces. For example, the Earth has been shaped and changed by climate, earthquakes, volcanoes and running water over millions of years. It can also be the result of human activity, such as the building of a new bridge or clearing of forest for farmland.

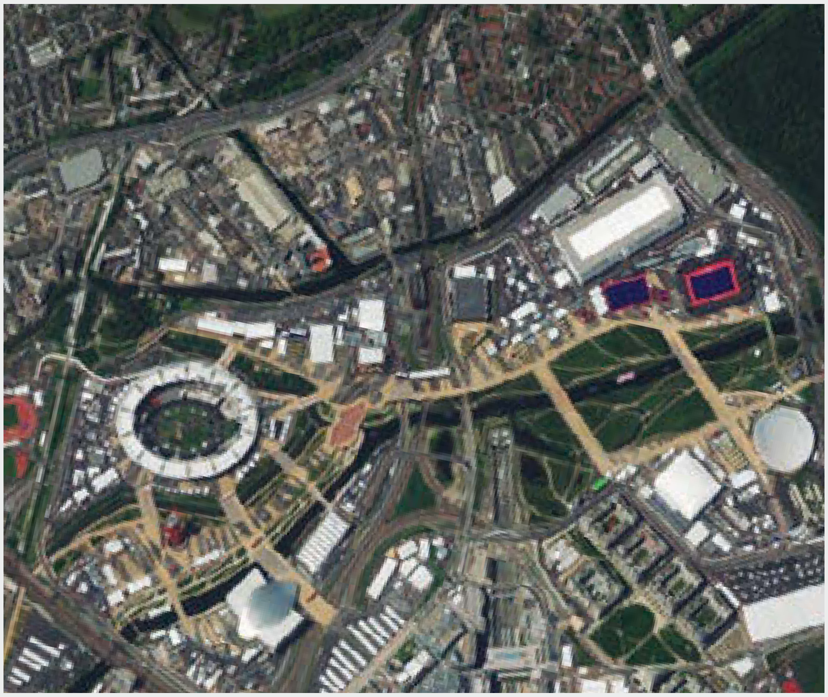
Changes also take place on many levels, from local through to global. Local changes that happen quickly, such as storm damage in your street, are easy to observe and explain. Regional or national changes resulting from a bushfire or an earthquake can also happen quickly and their effects can be widespread, with devastating impacts on places and people.

Observing and understanding changes is an important part of any geographical inquiry. Geographers need to look at different types of changes, why they have occurred, over what time period they have occurred and what further changes may take place as a result.

Sometimes changes can be positive, such as the regeneration of vegetation, while other changes can have negative consequences, such as the pollution of waterways from industry. Geographers play an important role in ensuring that change is managed in a sustainable way.



Source 6 In preparation for the 2012 Summer Olympic Games, Newham, in East London, was transformed from a suburb of derelict buildings and polluted rivers into a vast sporting complex.



Source 7 The resources and buildings for the London 2012 Olympic Games were planned with sustainability as a primary concern, adopting a Zero Waste Games Vision. The Velodrome in this photo was built using 100% sustainably sourced timber.

Scale

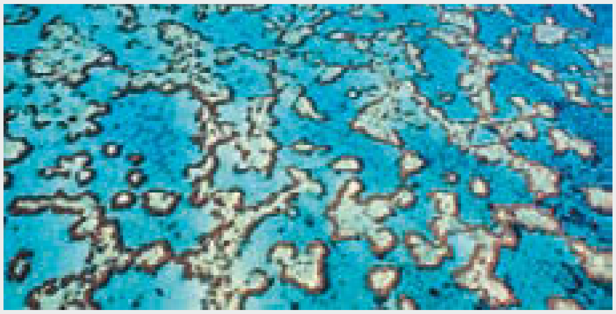
The concept of scale is used to guide geographical inquiries. Geographers study things that take place on many different spatial levels – meaning from small areas (such as a local park) to very large areas (such as the use of oil and gas all over the world). They use the concept of scale to look for explanations and outcomes at different levels. For example, a geographical inquiry on **climate change** may be carried out at a range of scales (from smallest to largest) (see Source 8).

Some geographical studies investigate a large area. For example, something that affects a whole country, such as a severe drought, would involve a study at the national scale. If an event or phenomenon affects the whole world, such as climate change and rising sea levels, it would be examined at the global scale.

It may be necessary to use different scales when studying the same thing. For example, as mentioned above, climate change is occurring globally and should be examined at the global scale. However, it can be examined at other scales too.

Source 8 Geographical inquiries can be carried out on a number of different scale levels.

Scale	Example of climate change inquiry
Local scale	Electricity consumption in your neighbourhood (increased use of air conditioning)
Regional scale	Coral bleaching on the Great Barrier Reef
National scale	Frequency of extreme weather events across Australia
International scale	Drought in Africa due to unreliable rain
Global scale	Reduction in Arctic sea ice; rising temperatures throughout the world



Source 9 The Great Barrier Reef off the coast of Queensland is the world's largest coral reef system. A geographical inquiry of the reef could be undertaken at a range of scales.

Check your learning 1.1

Remember and understand

1 List three natural environments and three built environments. Your answers can be drawn from the photographs in this section, or you can use your own observations.

Apply and analyse

2 Examine Source 5.
  a What evidence of change can you identify in this picture?
  b How might this change impact on the natural environment in this place?
  c How might it impact on the people in the nearby village?
3 Examine Sources 6 and 7.
  a Describe the arrangement of the sporting facilities. Using the key concept of sustainability, what factors do you think would need to be considered when planning the development of this area?
  b What examples of interconnection can you identify in these satellite images?
4 Examine Source 2. With a partner, construct four questions you could ask to investigate why so many people live in such a small space. Share your questions with your classmates.
5 The geographical concepts are closely linked to each other. For example, a geographer examining the changes at Newham in preparation for the 2012 Olympic Games would be interested in assessing the impacts and sustainability of these changes at the local scale. Describe some possible links between:
  a environment and sustainability
  b space and interconnection
  c place and space..

Evaluate and create

6 Research the host city for the next summer or winter Olympics. What changes are being made to natural and human environments in preparation for these games?
7 Choose one of the key geographical concepts outlined in this section. Find a photograph in a magazine or on the Internet that illustrates this concept. Explain your choice of photograph and how you think it describes the concept for you.

1.2 Geographical skills

Geographers are investigators. They explore the world around them by asking questions about what they see. These questions begin an investigation that requires them to collect and analyse information and to communicate what they have discovered. To complete an investigation they need a set of skills such as drawing **maps** and cross-sections, surveying, sketching and presenting information. Four sets of skills are used to complete a full geographical inquiry. These are listed in Source 1.

To become a better geographer you should try to learn new skills as you continue to practice, use and develop the skills you have already learned. It might help you to think of each of these skills as individual tools in your toolkit. For some geographical inquiries, you may only need to use one tool; for others, you may need to use many. As you develop each new skill you will have gained another important tool in explaining the natural processes and human activities that shape our amazing planet.

Source 1 The four categories of skills used in a geographical inquiry

Questioning and research	• Identify current personal knowledge, gaps, misconceptions, currency of information, personal perspective and possible perspectives of others • Construct, select and evaluate a range of questions and hypotheses involving cause and effect, patterns and trends, and different perspectives • Analyse and clarify the purpose of an inquiry using appropriate methodologies, ethical protocols and concepts to plan for, and inform, an investigation • Use a range of methods to collect, select, record and organise relevant and reliable information and/or data from multiple sources that reflect the type of analysis that is needed (e.g. questionnaires, surveys, emails, tables, field sketches, **annotated** diagrams), with and without the use of digital and spatial technologies • Identify the origin, purpose and context of primary sources and/or secondary sources • Use appropriate ethical protocols, including specific formats for acknowledging other people's information and understand that these formats vary between organisations
Analysing	• Use criteria to analyse the **reliability**, bias, usefulness and currency of primary sources and/or secondary sources • Analyse information and/or data in different formats (e.g. to explain cause and effect relationships, comparisons, categories and subcategories, change over time) • Account for different interpretations and points of view/perspectives in information and/or data (e.g. from tables, statistics, graphs, models, cartoons, maps, timelines, newspapers) • Analyse the 'big picture' (e.g. put information and/or data into different contexts, reconstruct information by identifying new relationships, identify missing viewpoints or gaps in knowledge) • Apply subject-specific skills and concepts in familiar, new and hypothetical situations
Evaluating	• Draw evidence-based conclusions by evaluating information and/or data, taking into account ambiguities and multiple perspectives; to negotiate and resolve contentious issues; to propose individual and collective action in response to contemporary events, challenges, developments, issues, problems and/or phenomena • Critically evaluate information and/or data and ideas from a range of sources to make generalisations and inferences; propose explanations for patterns, trends, relationships and anomalies; predict outcomes
Communicating and reflecting	• Select a range of appropriate formats based on their effectiveness to suit audience and purpose, using relevant digital technologies as appropriate • Develop texts, particularly explanations and discussions, using evidence from a range of sources to support conclusions and/or arguments • Deconstruct and reconstruct the collected information and/or data into a form that identifies the relationship between the information and the hypothesis, using subject-specific conventions, terminology and concepts • Compare evidence to substantiate judgements (e.g. use information and/or data from different places or times; use tables, graphs, models, theories) • Generate a range of viable options in response to an issue or event to recommend and justify a course of action, and predict the potential consequences of the proposed action • Reflect on why all findings are tentative (e.g. the changing nature of knowledge, changes in circumstances, changes in values)

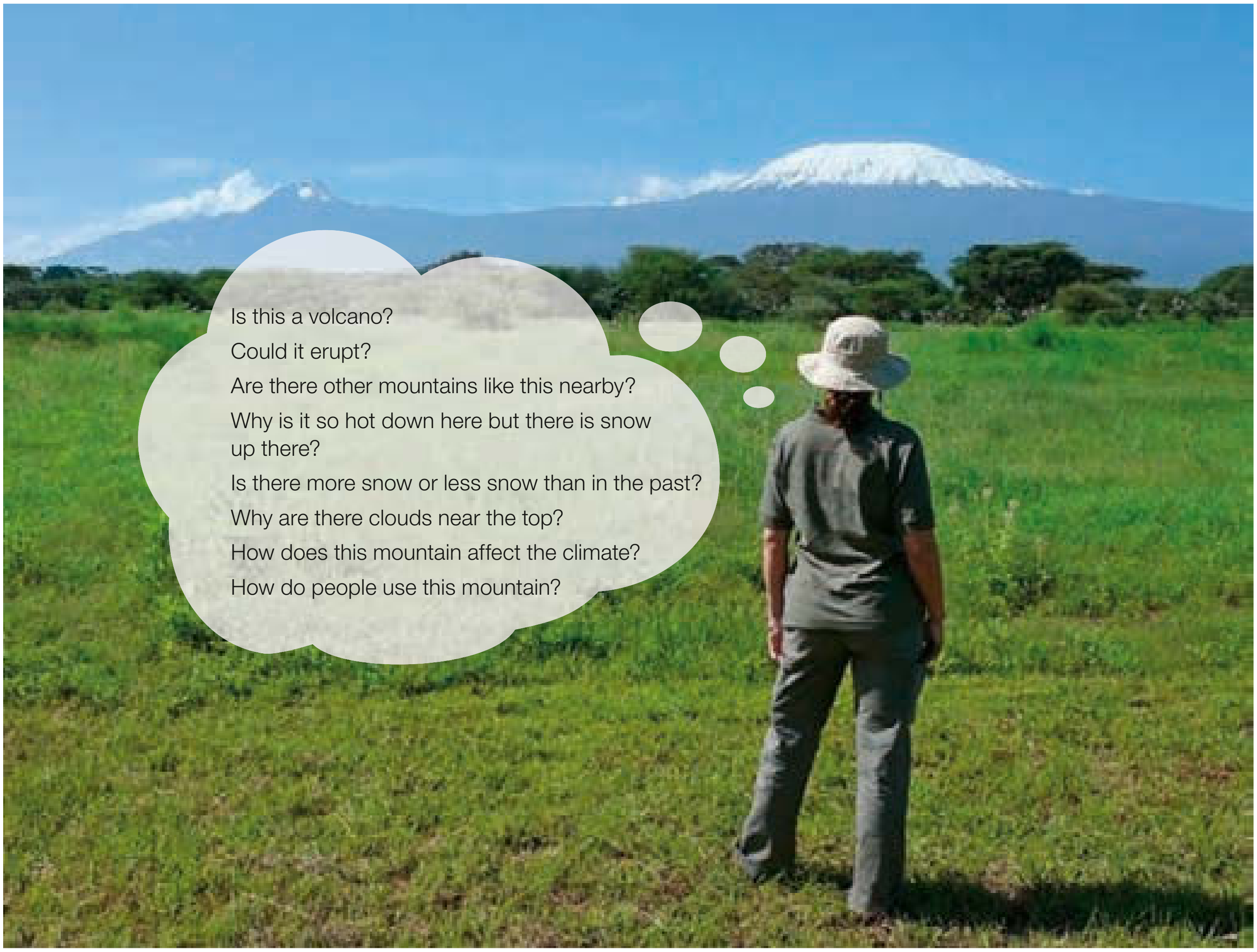
1.3 Questioning and researching

Observe the world and its geographical characteristics

Understanding our world begins by observing the processes that are taking place all around us. Geographers look at people, land, air, water, plants and animals and the connections between them to understand what is happening. They also seek to investigate where, why and how natural, managed and constructed environments are formed and changed. These observations often include identifying any problems or issues that need to be investigated and resolved.

Developing geographical questions

One of your greatest assets as a geographer is curiosity. Geographers look at the world around them and ask questions about what they see, experience or have thought about. You may, for example, see a news item about a volcanic eruption or hear a report about the world's most liveable cities. Or you may visit the centre of a large city on a field trip or a national park on holiday. As you begin to think like a geographer you will begin to ask questions about these events and places and these questions may be the starting point for a geographical inquiry.


Is this a volcano?
Could it erupt?
Are there other mountains like this nearby?
Why is it so hot down here but there is snow up there?
Is there more snow or less snow than in the past?
Why are there clouds near the top?
How does this mountain affect the climate?
How do people use this mountain?

Source 1 Asking questions is an important part of a geographical inquiry. This geographer is examining Mount Kilimanjaro, off in the distance.

skill**drill**

Developing geographical questions

You can learn to develop geographical questions that will help you begin an inquiry about a particular topic or place. Start your questions with the words 'what', 'where', 'how', 'why', 'what impact' or 'what should' when thinking about your topic.

Your questions should examine ideas such as:

- Where is it?
- How big is it?
- What pattern or shape is it?
- Why is it like this? Is it like this because something else is at this location?
- How does it interact with other things in this place?
- How is it changing?
- How should people best manage this change?

The very best questions open up an exciting area for you to explore. Examine Source 1. A visitor to this place might ask a simple question, such as 'How much snow is there on the mountain?'. This is a question with a relatively straightforward answer.

A better geographical question would be to ask 'Does the amount of snow on the mountain change over time?' This question opens up a whole new area to explore, because the answer to that question will lead on to further questions and greater depth of understanding. Some other example questions are:

- Is this a volcano?
- Why is it green on the ground but there is snow on the mountain?
- Are the animals all eating the same things?
- Is there more or less snow than in the past?
- How do people use the mountain?

Apply the skill

1. Why is 'Does the amount of snow on the mountain change over time?' a better geographical question than 'How much snow is there on the mountain?'
2. Examine Source 5 on page 9, which shows forest clearing in Myanmar. Work with a partner to develop a set of geographical questions about this place.
3. Where could you begin to find the answers to your questions?

Plan a geographical inquiry

Asking geographical questions is a good way to develop a range of possibilities for further research and investigation. It is usually best to narrow your investigation by selecting one of the geographical questions you have written as the basis for your inquiry. You should select a question in which you are interested and that helps you to better understand the environment you are investigating.

Planning an inquiry about Mount Kilimanjaro

Having chosen to investigate the key geographical question 'How does this mountain affect the climate?', it is time to consider what information you need to answer this question and where you are going to locate the information. A good way to do this is to use a planning table (see Source 2).

Source 2 Planning is a key stage in conducting a geographical inquiry.

Key inquiry question	Information needed	Possible sources of this information
How does this mountain affect the climate?	Climate data, particularly temperature and rainfall for places at various distances from Kilimanjaro including the summit	Atlas map to locate towns and cities at various distances from Kilimanjaro
		Encyclopaedia entry for the climates of Kenya and Tanzania
		Online search for climate data for selected towns and cities
	Observation of photographs and satellite images of the region	Photographs and satellite images of Kilimanjaro from throughout this chapter
		Google Earth, including historic imagery
	An understanding of the impact of landforms on temperature and rainfall	Printed resources such as geography textbooks, encyclopaedias and Bureau of Meteorology (BOM) books and leaflets
		BOM website

Collecting data

Good planning and preparation will ensure that your geographical inquiry will run smoothly, be relevant and give you the answers you are looking for. Once you have identified the issue, formulate your key inquiry question. You can conduct a sound, useful inquiry by collecting and recording the information you think you will need to answer your key inquiry question.

Geographers find answers to their questions in many places. They may collect information themselves by interviewing people, taking photographs, making sketches out in the field or conducting surveys and questionnaires. This kind of information will generally only be relevant to a particular inquiry and is called **primary data**.

Often a geographer collects information that supports his or her inquiry but has not been specifically collected or designed by the geographer for the inquiry. This type of information is called **secondary data**. Secondary data sources include maps, graphs, statistics and websites that someone else has developed. One of the best secondary sources of information may be photographs from newspapers and magazines, and satellite images from Google Earth. It is important to always evaluate any secondary sources for reliability, relevance and bias. This is particularly true for information obtained through the Internet. Unlike a printed source such as a book or atlas it can be very difficult to establish who has written and published information online.

Ethics in geography

When conducting research and obtaining data for an inquiry, it is important for a geographer to be mindful of issues that are likely to raise ethical concerns. This may include being aware of privacy concerns, ensuring anonymity if required, and obtaining informed consent from research participants. Geographers may also need to outline where and how the information obtained will be used or published, and special attention may need to be given for relational data where geographical references or co-ordinates might disclose a participant's location or identity.

If geographers undertake an inquiry that involves consulting with Aboriginal and Torres Strait Islander communities, they should be aware that there are guidelines and protocols that should be followed. While these are not necessarily rules, it is important to know that Aboriginal and Torres Strait Islander peoples have distinctive regional and cultural identities that require respectful consideration for meaningful consultation. This may involve preferred terminology, cues for cultural communication, and other means for making consultation harmonious and productive. If conducting such an inquiry, it is advisable to do further reading, such as of the *Aboriginal and Torres Strait Islander Peoples Engagement Toolkit*, which can be found online.

Recording and representing geographical data visually

Geographers present the information they gather during their inquiries in a number of different ways. They make maps, create graphs and tables or even draw diagrams to help them look for patterns in the data they have gathered. These tools help geographers analyse and interpret the information they have gathered, and also present the information to other people (the general public, the government, the media) and help them understand the geographer's findings.

Maps

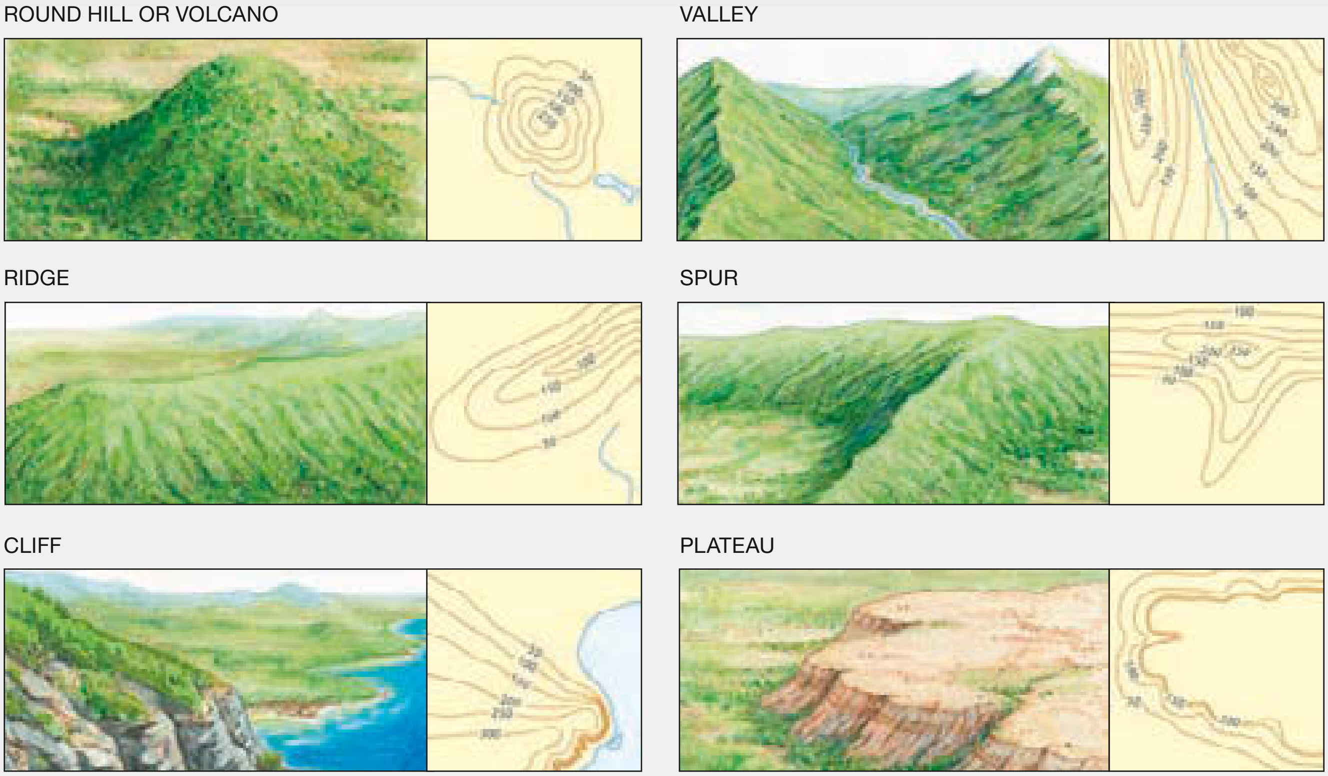
One of the most useful tools that geographers use to process information is a map. A map is a simplified plan of an area. Maps are drawn in the plan view (directly from above) because this ensures the **scale** will be the same across the entire area. If maps were drawn from an angle, some parts of the mapped area would look distorted and so it would not be an accurate representation of the area. When properly used, maps can reveal a great deal about our planet and the ways in which we use it.

Source 3 Mount Kilimanjaro in Africa

Topographic maps

A piece of paper only shows two dimensions: width and length. The Earth's surface, however, has a third dimension: height. Cartographers (map makers) use a variety of methods to show this third dimension.

Topographic maps are one of a geographer's most useful tools. Because most topographic maps are drawn of a small region they can show that region in great detail, right down to individual buildings and rocks. They also show the height of the land above sea level through the use of **contour lines**, which join together all places of an equal height. By learning to interpret the contour patterns made by these lines you can work out the shape and height of the land that has been mapped (see Source 4).

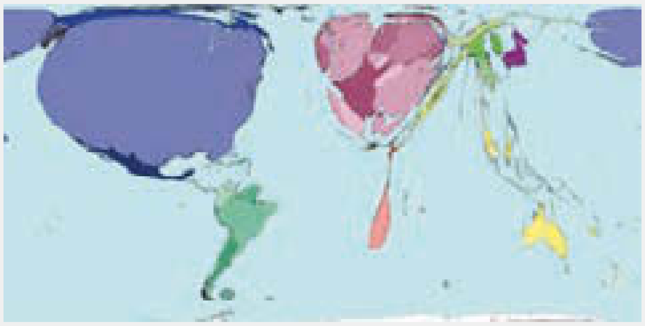


Source 4 Common contour patterns

Cartograms

You will have already seen **cartograms** in the course of your geography studies. These are the maps that look distorted and have areas that appear thinner or more enlarged than they would normally be, depending on what they are showing. Cartograms are sometimes called 'value by area' maps, which means the spaces on the maps are distorted to show a representation of a value rather than land area.

For example, while Vietnam is a relatively small country in terms of land area, it is the fifth largest rice growing country, so it would be exaggerated to a much greater relative size. The United States of America, which actually has a much larger land mass than Vietnam, is the 10th largest rice producer, so would appear much smaller than actual size on a cartogram.

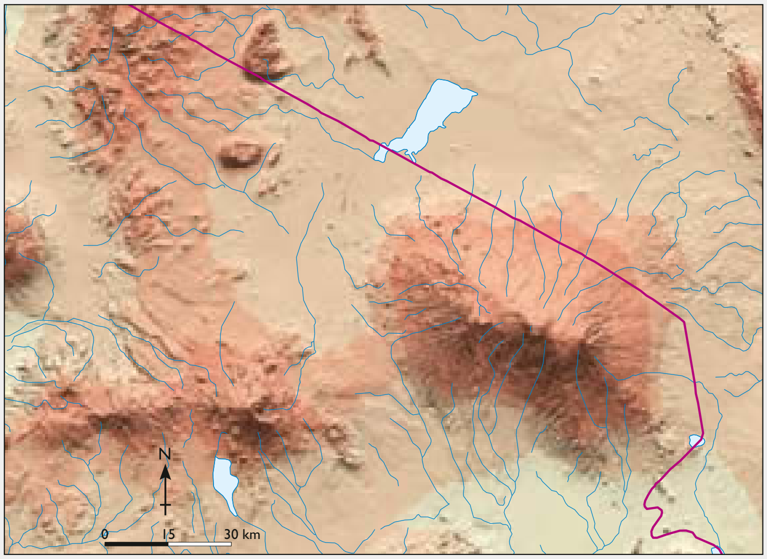


Source 5 This cartogram shows the percentage of the population living on more than US$200 a day. The distortion shows that the United States has many more people living on this amount than Asia does.

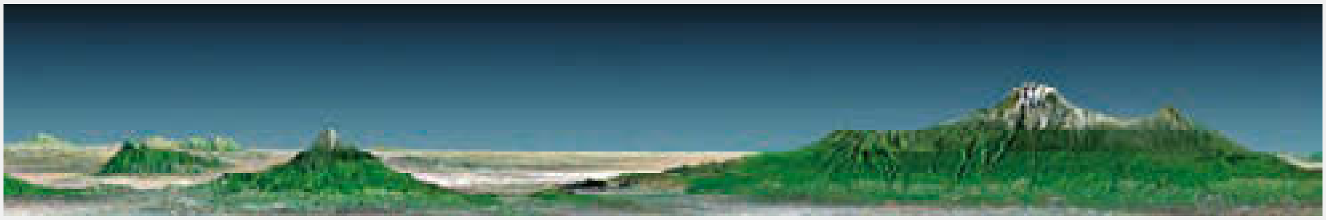
There are various software programs available that can generate cartograms.

Digital maps and terrain models

There are about 6000 man-made satellites orbiting the Earth. Many of these collect digital data about the shape and height of the land and transmit it back to computers on the ground. This data is then interpreted and can be used to draw maps. Cartographers can use computer programs to add colours to these digital maps to highlight certain aspects of the environment. In Source 6, for example, the land has been shaded according to its height. The data can also be manipulated in other ways. In Source 7 it has been used to create a side view of the landform being mapped. This type of illustration is known as a digital terrain model.



Source 6 In this digital map of the Mount Kilimanjaro region, land has been shaded according to its height above sea level. Shadows have also been added to help map users understand the shape and height of the land.



Source 7 This is a digital terrain model of Mount Kilimanjaro and the surrounding area. The data was collected by a NASA space shuttle and an orbiting satellite. Cartographers have exaggerated the height of the landform so that it appears twice as high as it actually is.

Check your learning 1.3

Remember and understand

1 What are the five sets of skills in a full geographical inquiry?

2 Imagine that while watching the news on television this evening you see an item about a large earthquake in China.

  a How could this news item be the beginning of a geographical inquiry?

  b Write a series of geographical questions about this earthquake.

Apply and analyse

3 For the geographical questions that you have written, develop a planning table similar to the one shown for Mount Kilimanjaro (see Source 2).

4 Use Source 6 to describe the terrain of Mount Kilimanjaro. Do you think Source 6 is more useful for this task that Source 7? Why?

Evaluate and create

5 a Bring a copy of your local newspaper to class. Search through the newspaper, or think about your local area, and identify examples of stories or issues that could be investigated as part of a geographical inquiry.

  b Choose one local issue and work with a partner to develop a series of geographical questions about it. Then, complete a planning table for one of your questions.

1.4 Analysing

Once you have collected, recorded, evaluated and represented your information, it is time to make sense of it all so that you can reach some conclusions about the geographical questions that began your inquiry. Geographers look for order, diversity, trends, patterns, anomalies and relationships in their information. It can often help to classify information by sorting it into groups.

Reliability

When undertaking an inquiry, geographers need to evaluate the sources they use for reliability and potential bias, as well as usefulness. In the case of collecting data from primary sources, such as interviewing subjects directly on a topic, the information gathered will be reliable because it is gathered first-hand. It is therefore important for the geographer to keep in mind any potential bias that may be influencing an interview subject's response. An interview that a geographer is conducting on the potential effects of turning local parkland into an industrial park, for instance, would have very different responses from a representative of the industrial developer than from a member of a local wildlife conservation group. It is important for a geographer to evaluate this kind of bias, and remember to ask questions about the motivation behind it.

When selecting secondary sources, such as maps, graphs, photographs or other data, the geographer also needs to ensure the data is reliable and unbiased. This includes evaluating the creator of the data – is the data from a recognised source like a government body, such as the Bureau of Meteorology or a research agency like the CSIRO? Is the data provided without bias? Or is it presented on a website for a company that might have a vested interest in influencing public opinion?

skill**drill**

Evaluating the reliability of websites

There is an enormous amount of material available online, but it is important to keep in mind that not all websites provide reliable information. You must be careful not to naively accept that all information published online is from a reliable source. Websites should be critically evaluated for reliability by following these steps:

Step 1 Find out how old the information is. When was it first published? This will help you decide whether it is useful for your inquiry or not.

Step 2 Find out who published the information. Is it possible they have a bias? You can often find out more about the organisation publishing information by going to their 'home' page or 'about us' page.

Step 3 Look at the extension at the end of the website address, as this gives you an important clue about the origin of the information. For example, .com is used by commercial organisations such as online stores, .org is used by non-commercial organisations such as NGOs and welfare groups, .gov by government departments, .edu refers to schools and universities, .biz by businesses and .mil by military groups.

Step 4 If you cannot find out when the information was published or who published it, it is probably too unreliable to use in a geographical inquiry. Look for a more reliable source of information.

Apply the skill

1 Common websites used for reference information include the CIA World Factbook, the Australian Bureau of Statistics, National Geographic and the United Nations Development Programme. Using the steps listed above, assess the reliability of the data found on these websites.

CENTRAL INTELLIGENCE AGENCY
Library
THE WORLD FACTBOOK

Source 1 This web page offers data about Tanzania. How can you determine if it contains reliable information?

Using the PQE method

PQE is a tool used by geographers to describe the data they have gathered (particularly on maps) and to look for patterns in this data. The letters PQE stand for pattern, quantify and exceptions.

P – Pattern

In this step, you need to give a general overview of any patterns you may identify.

When looking at any form of data, look for things that stand out or form patterns. A pattern may be a group of similar features on a diagram, a concentration of a particular colour or feature on a map, or a particular shape that is created by data on a column graph. For example, when looking at a map of Africa (see Source 2) you might say, 'The forests seem to be located mainly in Central Africa and Southern Africa'.

Q – Quantify

In this step, you need to add specific and accurate information to define and explain the patterns.

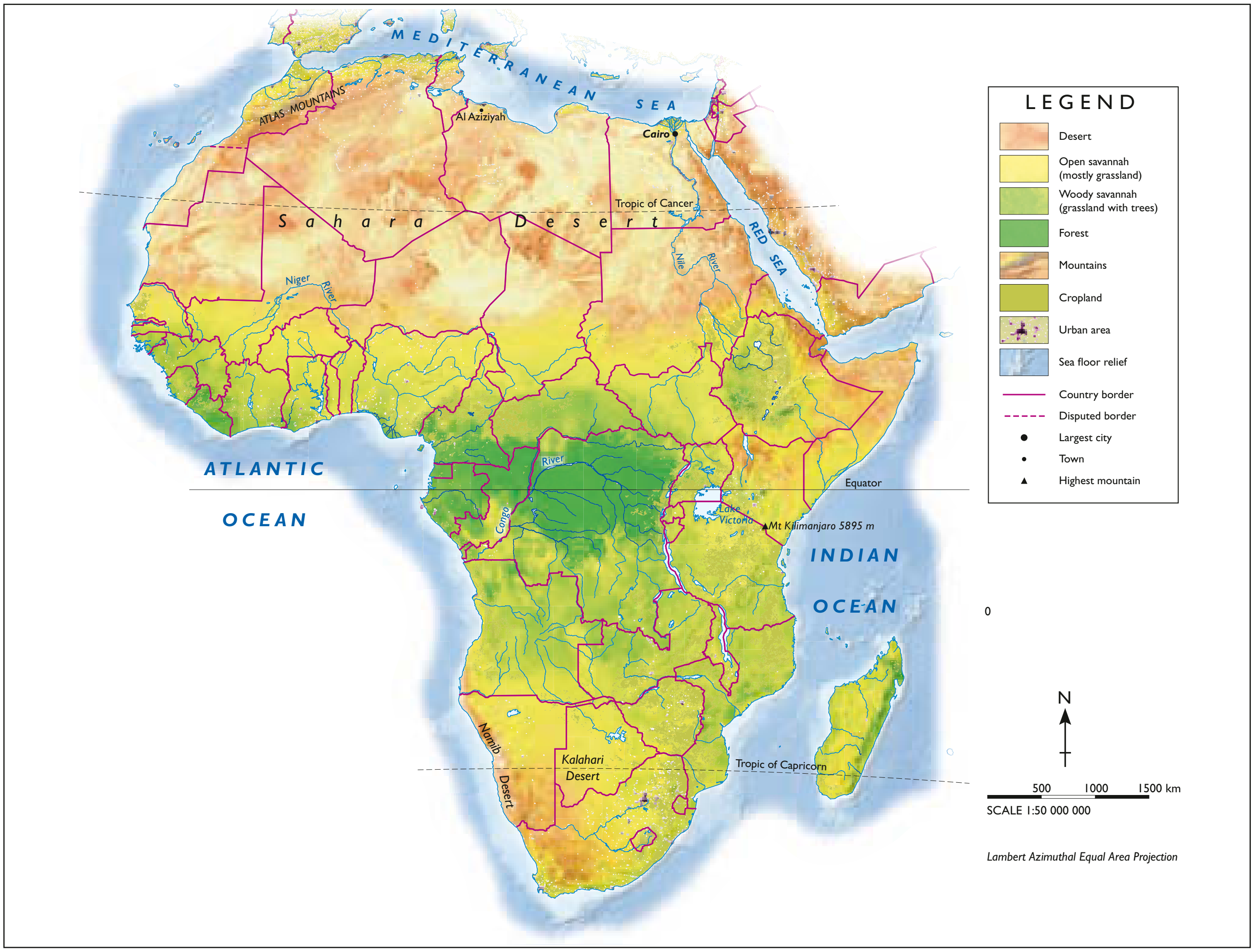
Quantifying involves using statistics, amounts, sizes and locations to give specific details. For example, rather than just saying, 'The most forest is located in the centre of the continent', you would need to quantify this statement. You might say instead, '240.3 million hectares of forest has been recorded in Central Africa, compared with 35.4 million hectares in East Africa'.

E – Exceptions

In this step, you need to identify everything that does not fit your patterns.

Often, you may find that there are things in your data that do not fit into a pattern you have identified. These are called exceptions. They also need to be identified and quantified. For example, you might say, 'There are also forest regions located in North Africa and West Africa'.

AFRICA: ENVIRONMENTS


MEDITERRANEAN SEA
ATLAS MOUNTAINS
Al Aziziyah
Cairo
Tropic of Cancer
Sahara Desert
RED SEA
Nile River
Niger River
ATLANTIC OCEAN
Congo River
Equator
Lake Victoria
Mt Kilimanjaro 5895 m
INDIAN OCEAN
Namib Desert
Kalahari Desert
Tropic of Capricorn
LEGEND
Desert
Open savannah (mostly grassland)
Woody savannah (grassland with trees)
Forest
Mountains
Cropland
Urban area
Sea floor relief
Country border
Disputed border
● Largest city
• Town
▲ Highest mountain
N
0
500
1000
1500 km
SCALE 1:50 000 000
Lambert Azimuthal Equal Area Projection

Source 2

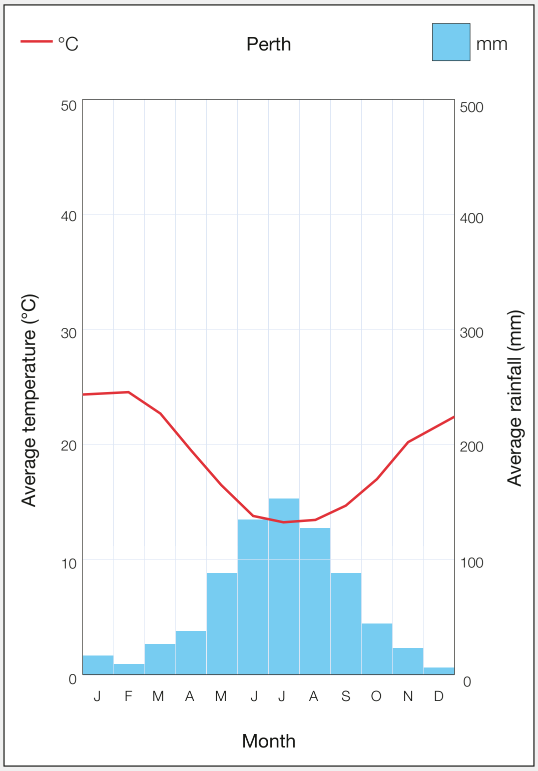
Source: Oxford University Press

Graphs

In Years 7 and 8 you will have learned how to create and interpret simple graphs, such as **bar graphs**, column graphs and pie charts. In Years 9 and 10 you will be working with more complex graphs. You won't necessarily be creating these kinds of graphs yourself, but you will be learning how to interpret them and make sense of the information they provide. Some of these styles of complex graphs are described below.

Climate graphs

Climate graphs show the general climate of a place – what the weather is like overall in a certain location, graphing the average monthly temperature and rainfall over the course of a year (or other set period of time) (see Source 3). Climate graphs combine line and column graphs. Temperature is recorded as a **line graph** and rainfall is recorded as a bar graph.

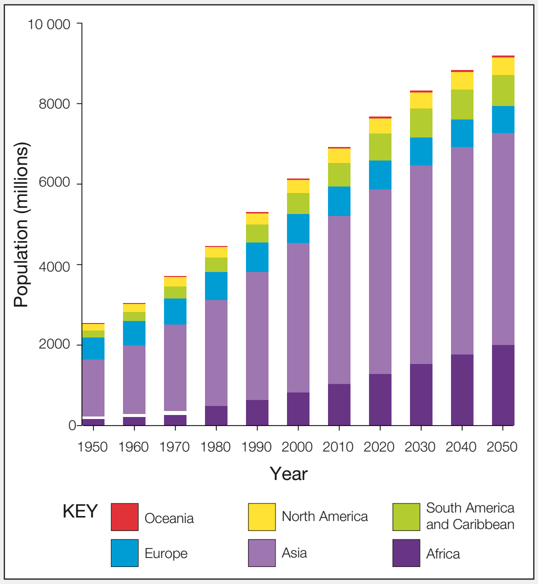


Source 3 A climate graph showing the average monthly temperature and rainfall in Perth

Compound column graphs

A **compound column graph**, sometimes called a stacked column graph or stacked bar graph, is used by geographers to compare the parts of something with the whole. They are a more complex type of column graph in which each column is split into sections. The results are then stacked on top of each other, in different colours or different shades of a colour, so that results can be easily compared (see Source 4).

Each column in a compound column graph represents a total, and each different coloured segment represents a part that makes up that total. The graph in Source 4, for example, shows the total increase in world population, from 1950 projected up to 2050. Of the total increase in population, it is immediately clear that Asia, coloured light purple, has experienced and will continue to experience the greatest growth. It is also immediately clear that Oceania, coloured red, has experienced very small population growth in comparison. Presenting the information in this way means we can quickly see and compare a number of figures that contribute to a total.

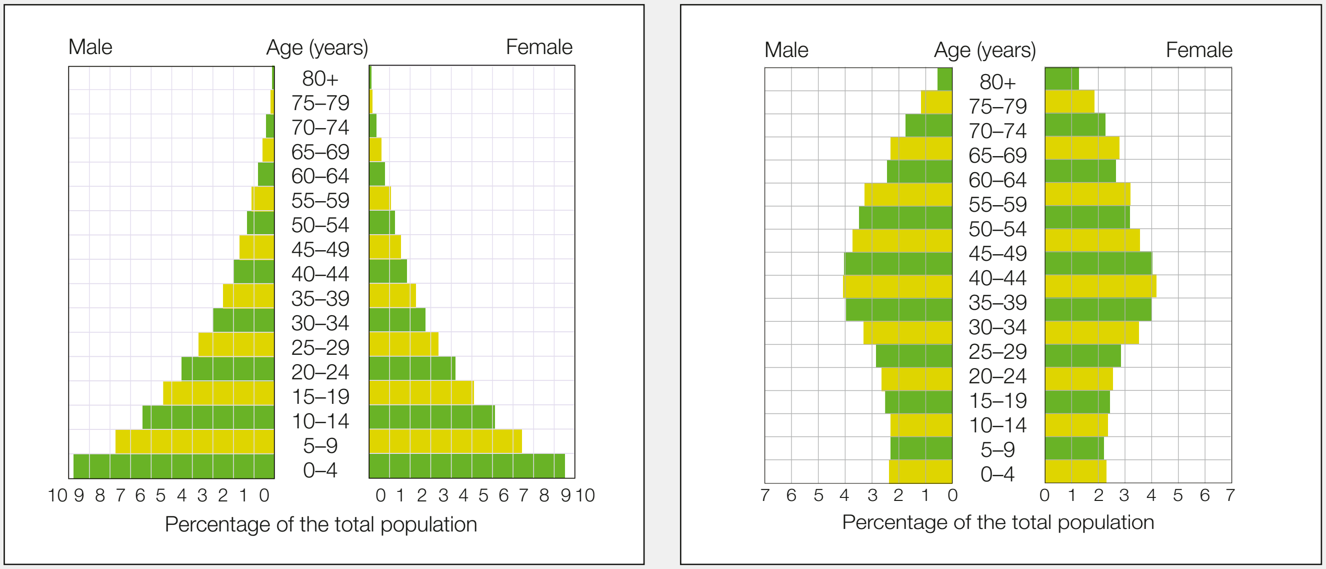


Source 4 A compound column graph showing the increase in world population by region, 1950–2050 (columns on the right provide projections)

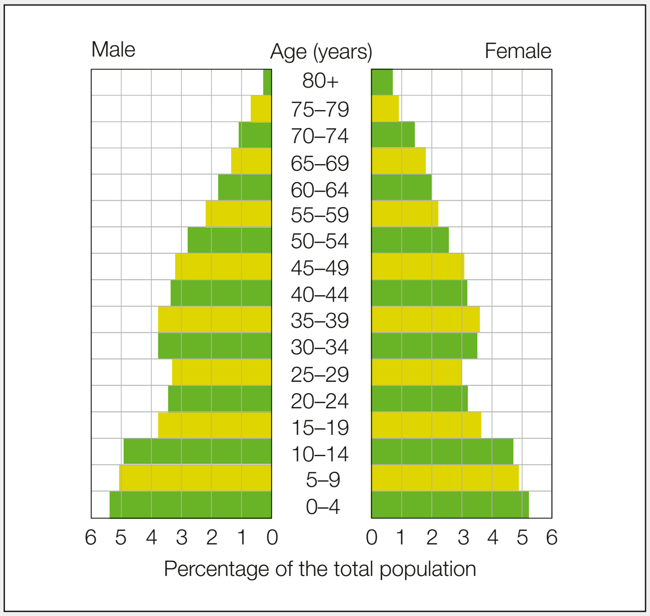
Population pyramids

Population pyramids are horizontal bar graphs that show the proportion of males and females in different age groups in a population. They can be used in a number of ways. Most commonly, they are used to compare the population structures and growth rates of different countries. A triangular-shaped graph shows a population with a high birth rate – that is, the population in that country is growing – while a graph that tapers in (is narrower) at the younger ages indicates a population that is contracting or declining (see Source 5).

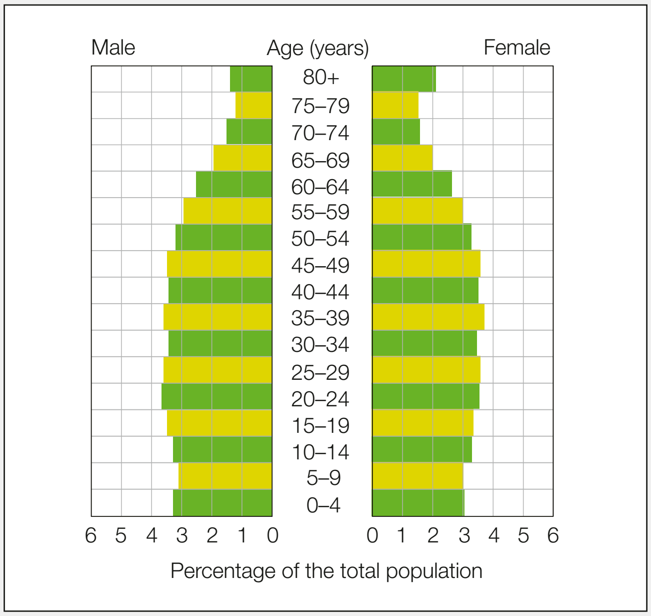
Population pyramids can also help geographers to identify the ways in which the population in a single country is changing over time. In these population pyramids of Australia's population, for example, it is clear that the percentage of Australia's population over the age of 65 increased between 1960 (see Source 6) and 2009 (see Source 7). Geographers describe this change as the ageing of the population.



Source 5 Population pyramids showing growing (left) and contracting (right) populations



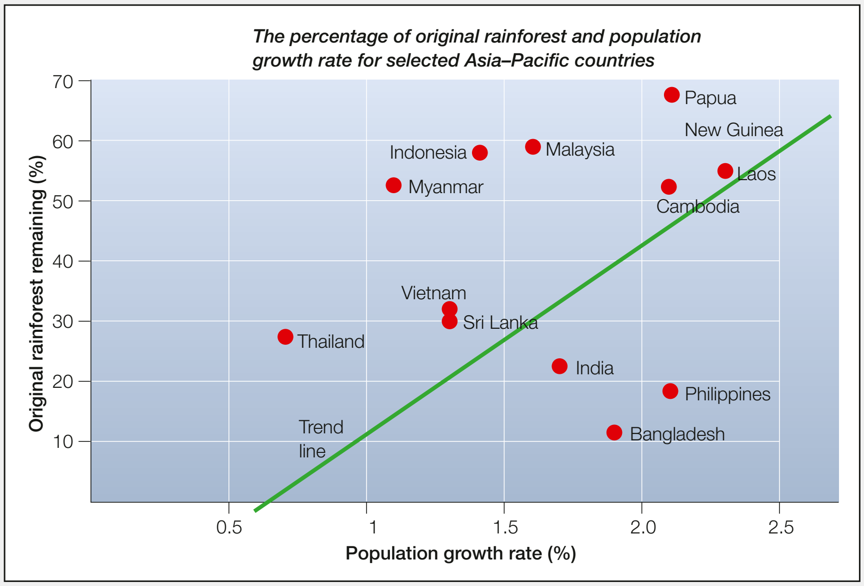
Source 6 Population pyramid for Australia, 1960



Source 7 Population pyramid for Australia, 2009

Scatter plots

Maps can be useful for showing a pattern but they don't really explain that pattern. A special type of graph, called a **scatter plot** (or scatter graph), is a better way of doing this. A scatter plot compares two sets of data in a visual way so that connections between them can be easily seen. Scatter plots are also called scattergrams. The following scatter plot compares the amount of original forest cover remaining in selected Asian countries with their population growth rates. It is essentially testing the theory that forests are more endangered in countries where the population is growing rapidly.



Source 8 Scatter graph showing remaining forest and the population growth rate.

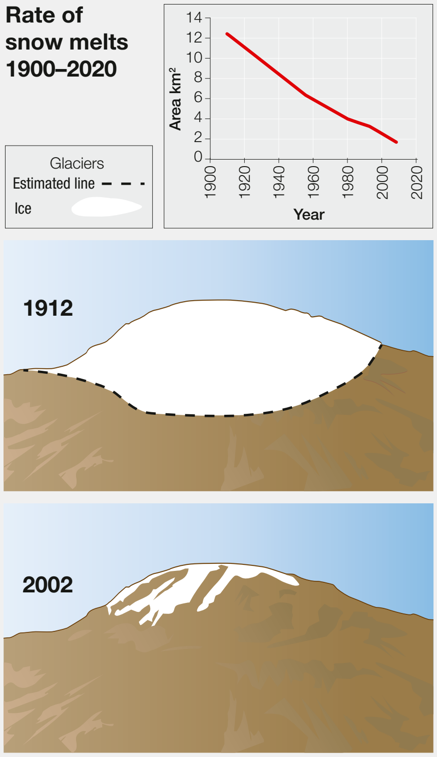
Because most of the countries lie close to the trend line in this graph it is possible to say that there is a relationship between the amount of forest in a country and the rate at which its population is growing. Countries with the fastest growing populations have the most rainforest remaining. Those countries that lie apart from the general trend such as Bangladesh are called outliers. A geographer studying this graph might use it as the beginning of a geographical inquiry into deforestation in Bangladesh.

Other graphic representations

In addition to maps and graphs, geographers use a range of other visual representations to communicate information they have collected. These include geographic diagrams, sketches, tables, **geographic photographs** and geographic information systems (GIS). These ways of presenting information allow geographers to communicate their findings in the most clear and appropriate manner.

Geographical diagrams

Geographical diagrams are simplified drawings of the real world. They allow geographers to show the features or characteristics of places or things much more directly than describing them in words. Certain interesting or complex processes can also be easily explained and demonstrated in a diagram, and communicated quickly and effectively by simple visual representation (see Source 9).



Source 9 This diagram shows the dramatic rate at which snows have melted on Mount Kilimanjaro.

Tables

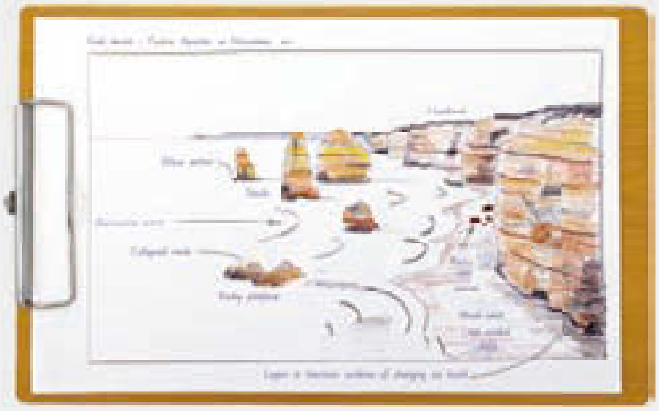
Tables allow geographers to present and compare data by organising it under different headings. Tables can be useful for presenting information over a range of time periods or locations.

Source 10 This table, based on data gathered by geographers in 2006, shows the change in area of seven glaciers (A–G) on Mount Kilimanjaro, 1912–2003.

Areas (10^3 m^2)	Glacier Area A	Glacier Area B	Glacier Area C	Glacier Area D	Glacier Area E	Glacier Area F	Glacier Area G	Total
1912	5676	3	27	5011	811	372	158	12058
1953	3829	0	16	2156	493	181	0	6675
1976	2440	0	0	1409	209	113	0	4171
1989	1900	0	0	1168	147	90	0	3305
2003	1304	0	0	1025	132	49	0	2510

Geographical sketches

A **geographical sketch** can be an extremely useful way of collecting information and presenting it in a straightforward and immediate way. They are often completed in the field (and are known as field sketches) or are sketched from photographs. The aim of a geographical sketch is to focus on those parts of the environment that are relevant to the current geographical inquiry. For example, a geographer studying the role of waves in the erosion of a coastline would sketch the rocks and landforms of a beach while another geographer studying tourism at the coast would sketch the buildings and roads at the same beach. Sketches allow the geographer to simplify information to make it easier to understand.



Source 11 Field sketches are useful for capturing information quickly and directly.

Geographic information systems (GIS)

A **geographic information system** (**GIS**) is a way of collecting, storing, presenting and using geographical data. GIS encompasses collecting geospatial data – real-world distance between landmarks, water depth, height and width of buildings, layout of streets and suburbs – and presenting it through digital means. Smartphone apps like Google Maps and Google Earth use GIS data to allow you to navigate through the real world, using data that has been gathered using computer technology. GIS has many different applications and is used for planning, telecommunications, transport and logistics, to name just a few.

Source 12 Geographic information systems (GIS) gather present real-world geographical data using computer technology. Today, GIS can be found on almost every smartphone in the form of apps like Google Maps and Google Earth.

Using other methods to interpret geographical data

Analysing geographical photographs

Landscapes can be photographed from several different angles depending on the position of the camera at the time the photograph was taken. Each angle makes some features of the landscape easier to see and interpret than other features, and so you need to carefully consider at which angle the photograph has been taken.

Analysing satellite images

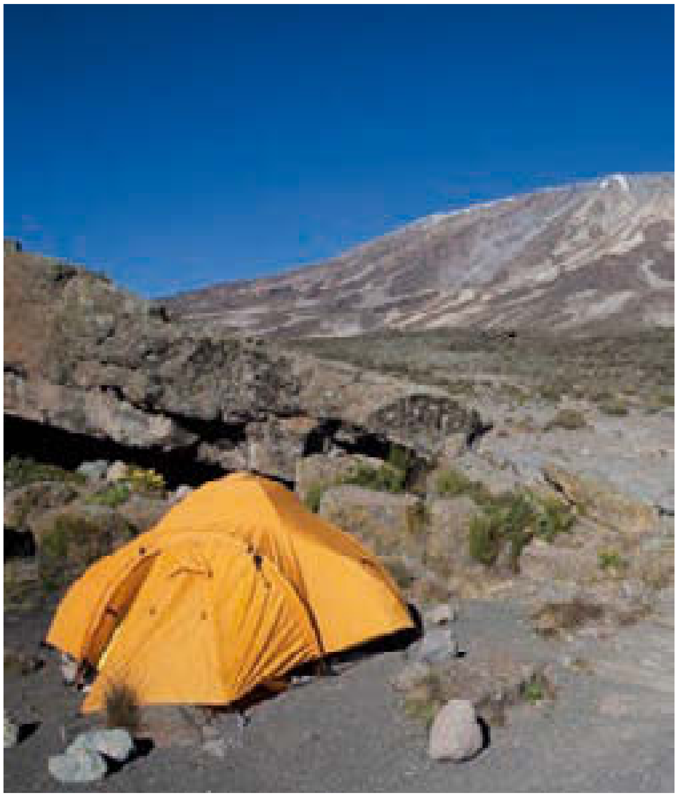
A satellite image is taken from space. It allows us to see large areas of the Earth's surface. These images are often used to investigate patterns such as the streams and rivers that radiate from Mount Kilimanjaro. It is difficult, however, to see smaller features of the environment.

Analysing false colour images

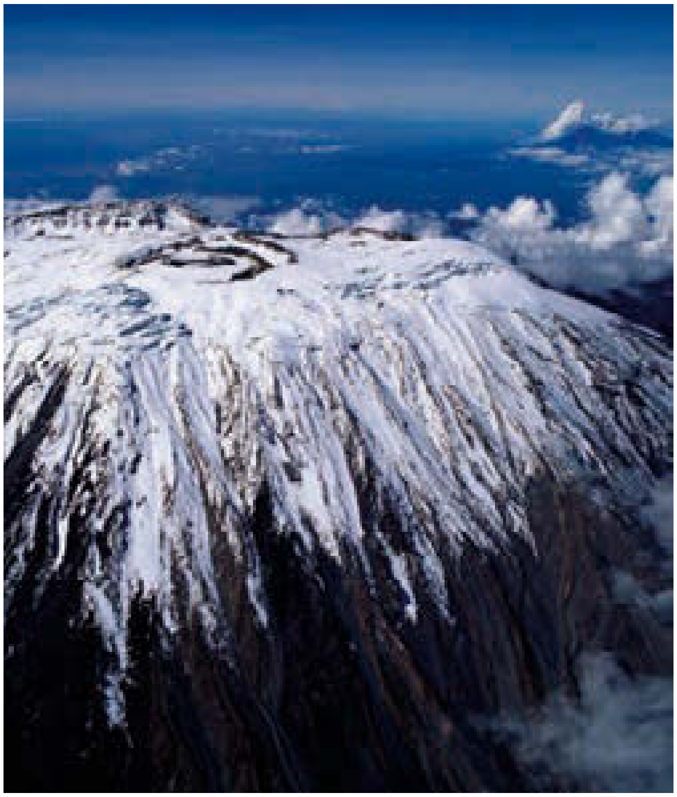
You may have heard the terms '**false colour image**' or 'false colour map' before. The term 'false colour' does not mean the colours used in an image are incorrect, it just means different colours have been used to make the image or map easier to interpret. The cartographer or person working on the image has chosen colours that make some aspects easier to see or understand than a normal 'natural' photograph or map would be.

The colours used in a false colour image can be quite exaggerated and unnatural-looking. This is because the colours of the natural features are too similar to demonstrate a particular point or aspect. If someone is trying to show where a muddy brown river meets a brown-coloured riverbank where there are brown rocks and some brownish shrubs, they might decide to use false colour to clearly show where the different elements are. In that case, they may decide to make the shrub areas bright green, the river neon yellow and the rocks bright red, leaving just the river bank brown.

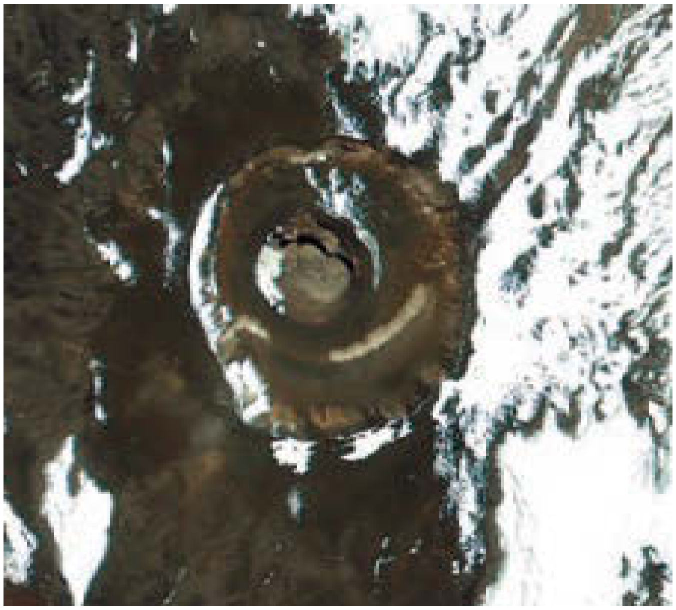
You should examine the accompanying legend to interpret the colours used in a false colour map.



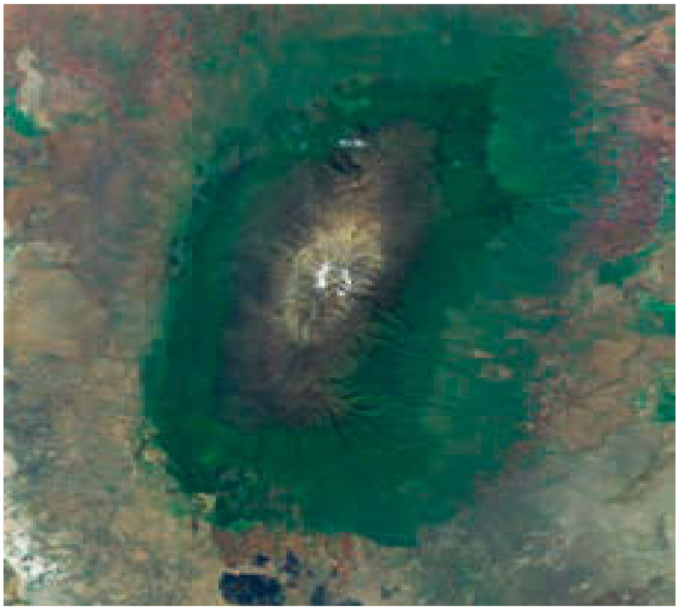
Source 13 In this **ground level photograph** of Mount Kilimanjaro, the camera is being held by someone at the same level as the landscape being photographed. This angle allows you to clearly see the height of any object and the detail in vertical surfaces. However, objects such as the mountain and the tent hide the landscape behind them.



Source 14 In this **oblique aerial photograph** the camera is positioned above the landscape, but is angled towards the scene being photographed (oblique means 'at an angle'). This allows you to see both the foreground and the background of the scene. You can also see both the height of an object and its width or area. Objects in the background, however, seem much smaller than those in the foreground.



Source 15 In this **vertical aerial photograph**, the camera is positioned directly above the landscape. This vertical (or plan) view allows you to see the extent of any feature such as Kilimanjaro's crater. It is very difficult, however, to judge the steepness of the mountainside or the depth of the crater. Plan views are used for making maps, as the scale is the same over the area shown and similar objects look the same size.



Source 16 This image of Mount Kilimanjaro was taken by a satellite orbiting at 830 km above the Earth's surface.

Check your learning 1.4

Remember and understand

1 Why is it important to assess the reliability of data?

2 What do the letters PQE stand for?

3 What is an oblique aerial photograph?

4 What are some of the advantages and disadvantages of using a vertical aerial photograph?

5 What advantages do scatter plots have over maps?

Apply and analyse

6 Look at Source 2 on page 19. Use the PQE method to think about Africa's deserts.
   a Can you identify a pattern?
   b Can you quantify this pattern?
   c Are there any exceptions in this pattern?

7 Which type of photograph would you take on a field trip?

8 Some geographers are very interested in the amount of snow and ice on Mount Kilimanjaro, as it has been gradually declining for several decades. Which type of photograph do you think would be most useful to show the decline of the total area of the mountain's snow and ice?

9 What kind of graph or usual tool would be best to analyse the following data?
   a The number of people living in Perth this year
   b Comparing an increase in food consumption between countries over time
   c Rainfall levels in the Pilbara.

Evaluate and create

10 The oblique aerial photograph (Source 14) was taken in 1991 and the ground level photograph (Source 13) was taken in 2009.
   a How has the mountain top changed in this time?
   b With a partner, discuss some geographical questions you could ask to investigate why the mountain has changed in this time. Don't worry about the answers; just concentrate on writing some good questions.
   c Share your questions with the class. List three questions from the class discussion that you think could be the beginning of a geographical inquiry.
   d Where could you find information to help you investigate these questions?

11 Research the size of a country other than Australia over a 10-year period. Create a graph to present your findings.

1.5 Evaluating

Drawing conclusions

Once you have collected and analysed your information, the next stage of a geographical inquiry is to evaluate what you have learned in order to draw a conclusion. In order to do this you must critically evaluate the information or data that you have collected. There are a number of factors that should be considered in order to achieve this:

- Relationships – Considering the relationships, patterns and trends between data sets is a very important part of drawing conclusions. For example, geographers have found that deforestation, or decreasing levels of vegetation, on Mount Kilimanjaro corresponds to decreased levels of rainfall at the base of the mountains. From this they might be able to conclude that deforestation negatively impacts communities living around the base of Mount Kilimanjaro.
- Ambiguities – Sometimes our analysis or research will not provide any clear answers or reveal any distinct trends. It is best to avoid drawing conclusions from ambiguous or vague data as this can skew our results.
- Different perspectives – It is important to consider different points of view and approaches to an issue. Understanding as many perspectives as possible helps to give geographers a broader knowledge from which to draw conclusions. It also prevents their evaluations from being influenced or biased by one idea.

There are a number of methods to evaluate your evidence. For example, the SHEEPT method can be used to evaluate the many factors influencing your data.

Using the SHEEPT method

SHEEPT is a tool used by geographers to help them consider the many factors that may contribute to the patterns identified in their data. When you are examining issues related to your inquiry, it is useful to think about them in terms of these six factors and rank them in order of importance. This will help you reach your conclusions. The letters SHEEPT stand for:

S social (S) – factors relating to culture and people

H historical (H) – factors relating to past events

E environmental (E) – factors relating to the natural environment (including climate, landforms and vegetation)

E **economic** (E) – factors relating to the earning or spending of money (including income earned from industry and tourism and the cost of building a dam or highway)

P political (P) – factors relating to governments (including laws, regulations and policies)

T technological (T) – factors relating to the availability and use of different types of technology (including the development of greener technologies, alternative energy sources and GIS).

Source 1 Geographers critically evaluate information to draw conclusions about deforestation on Mount Kilimanjaro and its negative impact on surrounding communities.

Predicting outcomes

If you have collected enough information during your research, you should be able to identify trends, patterns or relationships in your data. For example, when you analyse your data of climate on Mount Kilimanjaro, you might notice a yearly increase in the temperature. If this temperature has increased every year for the last twenty years, you might predict that next year it will rise again.

As we have learned, there are many factors that can change or influence an environment, so predictions will not always be correct. However, it is possible to use a range of sources to make a well-educated estimate. By identifying trends and patterns in your research, geographers can learn more about an environment and what might happen to it in the future.

Planning for action

When you evaluate your research and predict outcomes, you may find that there is a problem and action is needed in order to respond to the issue you have been investigating. For example, if a link is made between environmental damage and human activity, a geographer might develop a plan to minimise the impact of human activity in order to protect the environment.

There are a number of different ways that you can take action to make a change. These include:

- creating a fact sheet or multimedia presentation about the issue to inform your class, school or community
- using social media to raise awareness and gather support
- emailing your local government representative or Member of Parliament about the issue
- inviting an expert speaker to present at your school assembly
- planning a campaign to raise money for the issue.

Check your learning 1.5

Remember and understand

1 How can SHEEPT methods assist us to draw conclusions?

2 Why is it important to consider many perspectives when drawing conclusions?

Apply and analyse

3 A company involved in logging the forests on Mount Kilimanjaro has offered you a report on the environmental effects of deforestation. Why should this not be the only research you draw conclusions from?

4 Identify a popular place in your local town or city, such as a park, beach, shopping centre or other landmark. Using the SHEEPT method, in groups, brainstorm factors that you think might impact on the number of visitors to that place.

Evaluate and create

5 Conduct your own Internet research on the climate around Mount Kilimanjaro and use the SHEEPT method to think more closely about the factors that affect it. List at least one point for each of the SHEEPT factors.

Source 2 Trends and patterns can be used to predict outcomes. For example, past climate information can be used to make predictions about the changing climate of Mount Kilimanjaro.

1.6 Communicating and reflecting

During a geographical inquiry you may discover something new that other people should know about. It is important that you be able to communicate your findings clearly and effectively. There are several ways of doing this and you should select the method that best suits your audience and purpose:

- oral methods, such as reports, discussions and debates
- audio methods, such as radio reports
- graphical methods, such as graphs, annotated photographs, sketches and satellite images
- written methods, such as essays or other text-based presentations.

skill**drill**

Planning, creating and delivering a PowerPoint presentation

Geographers often present their findings to an audience in order to share the results of an inquiry and help others understand how this impacts on their world. Using PowerPoint is a good way of organising and presenting your findings.

You may have found doing oral presentations a little daunting in the past, but following these steps will prepare you to give a PowerPoint presentation with confidence. PowerPoint allows you to embed images and provides a structure for outlining your key points in a clear and concise way. You can then talk through your presentation using the slides to both prompt and support you – using visual aids captures your audience's attention and makes your presentation a lot more informative, too.

Follow these simple steps and tips when planning, creating and delivering the findings of a geographical inquiry.

Plan your presentation

Step 1 Gather the findings of the research you have carried out as part of your geographical inquiry. This should include any written research materials you have collected, the sources you have used, the results of any surveys or interviews, and a range of relevant images, graphs, maps or photographs.

Step 2 Plan your presentation carefully so it has a clear beginning, middle and end. It's likely that you will have a lot of information, so it's important that you present only the most relevant parts and that these are structured logically for the audience.

What Actually Causes Volcanoes?

Source 1 A PowerPoint presentation can be a very effective way of presenting the findings of your geographical inquiry.

Step 3 Know the requirements of your presentation. Your teacher will tell you how long your presentation is expected to be and what key points need to be covered. It is important that you plan your presentation in line with these requirements. For example, if you are required to talk for 10 minutes, you might like to present around 10 PowerPoint slides and talk to each one for around a minute. Before you start creating your PowerPoint presentation, it is really useful to sketch out a rough plan of what you want to cover on each slide. Have a practice on your own following your plan. Time how long it takes you to cover the information you plan to fit on one slide. Plan the rest of your presentation using this as a guide.

Create your presentation

Step 4 Once you have worked out the length of your presentation and the content you need to cover, it is time to create your slides. If you are not familiar with PowerPoint, there are plenty of online guides to assist you. Here are some tips to help you create a clear and visually engaging PowerPoint presentation:

- Be sure you present the content in clear, concise dot-point form, not huge slabs of information in paragraph form. You do not need to put all your findings up on the screen.
- Do not fill up your slides with a lot of random pictures that only loosely relate to the content. Include visuals that relate to the content on that particular slide.
- A common mistake is to have objects and text moving on the screen in a way that just distracts the audience. Use graphics, sound, video, animations and transitions only if they add value to the point being made.
- Use a design that ensures your audience can clearly see and read the slides. You need enough contrast between the text colour and the background colour on the slide, and make sure your font size is large enough.

Step 5 Prepare a set of cue cards. When delivering an audiovisual presentation to an audience do not just stand up and read out the text on each slide. Rather, you should be talking in a way that develops and expands the points on each slide. Carefully plan in advance what you are going to talk about during each slide. Record this plan on cue cards, and refer to these cue cards during your speech to remind you of what to say. Cue cards are also a great support to have if you are prone to nerves!

Step 6 Practise your presentation. You can do this on your own, or in front of a friend or family member. You might feel a bit silly at first, but practising will help you perfect your timing and get you used to talking through the key points of your presentation using your cue cards and slides to support you.

Deliver your presentation

Step 7 Before delivering your presentation, be sure that you're confident that the technology you're using is in good working order. Prior to class, check that everything is working as it should and that the screen you are projecting onto is ready and clearly visible to the audience. If your PowerPoint presentation contains any audio or video footage, check that your speakers are working and audible to the audience.

Step 8 Deliver your presentation by working through the slides in the same way you practised. Here are some tips to help you deliver the best PowerPoint you can:

- Speak clearly – not too fast, not too slow. Vary your tone and pitch to make your presentation more interesting.
- One thing at a time – what is on the screen should be the thing you are talking about. Your audience will quickly read every slide as soon as it is displayed. If there are four points on the slide, they will have read all four points while you are still talking about the first point. Plan your presentation so just one new point is displayed at any given moment. Click to go to the next point only when you are ready to talk about that next point.
- Make eye contact with different members of your audience. Do not just look down at your cue cards!

Step 9 Invite the audience to ask questions and do your best to answer them correctly. If you do not know the answer, or are unsure, don't just make something up on the spot. You are better off being honest and offering to answer any questions at a later stage once you've researched the answer.

Apply the skill

1 Prepare and deliver a PowerPoint presentation on an issue of geography that you find interesting. It could be the local issue that you researched in the previous section, or something you have noticed in the news. Ensure you include some interesting visual elements, such as photographs or graphs, as well as your key points.

Reflecting

The final steps in completing a geographical inquiry are to reflect on the results of your inquiry and the methods that you used. This is an essential step as it allows you to learn important lessons from any mistakes that you have made and apply these lessons in your next geographical inquiry. There are several ways to reflect on your geographical inquiry. Reflecting involves looking at what you have learned, thinking about how it was learned, and asking critical questions about the way your geographical inquiry was conducted. One of the best methods to help you reflect is to complete a self-evaluation checklist (see Source 2).

The title of my geographical inquiry is: ☐

My geographical inquiry set out to investigate: ☐

GENERAL POINTS	My rating					Comments
	1	2	3	4	5	
I was able to complete all stages of my geographical inquiry.	☐	☐	☐	☐	☐	☐
I was able to answer all my key inquiry questions.	☐	☐	☐	☐	☐	☐
I was able to plan my inquiry effectively.	☐	☐	☐	☐	☐	☐
My maps, graphs, tables and diagrams were clear and accurate.	☐	☐	☐	☐	☐	☐
I was able to analyse my data and reach a conclusion.	☐	☐	☐	☐	☐	☐
I was able to communicate my findings in an interesting and appropriate way.	☐	☐	☐	☐	☐	☐

AREAS OF STRENGTH	Comments
My areas of strength are:	☐
I'm getting much better at:	☐

AREAS NEEDING IMPROVEMENT	Comments
The part I found most difficult was:	☐
I need the most help with:	☐

IMPORTANT ISSUES HIGHLIGHTED BY MY INQUIRY	Comments
The most important thing I learnt from my inquiry was:	☐
This issue is important to me because:	☐
This issue is important to my community /country/world because:	☐

Source 2 A self-evaluation checklist is a very useful way of reflecting on the findings of your geographical inquiry.

Responding

As well as reflecting on the ways in which you conducted your inquiry, you also need to respond to what you found out. You may even decide that you need to recommend some action based what you found.

Geographers often use the information gathered and analysed in their inquiry for a specific purpose. This could be to report on an issue and educate people, to raise awareness of a potential problem, or to lobby local, state or federal government about a particular concern. This can be done via various means, from presenting official reports or studies, to using social media and starting an online petition. The work you do as a geographer can contribute to your environment, and responding and acting is an important part of this work.

If the results of your geographical inquiry lead you to recommend a plan of action, there are some important things to consider:

- Is it environmentally sustainable? Does the plan impact in a negative way on the natural environment and natural processes?
- Does it bring more economic benefits than it costs? Is it affordable in both the short term and the long term?
- Does everyone affected by this plan of action benefit from its outcomes or just a few people?

Case study

A geographical inquiry conducted on the lower slopes of Mount Kilimanjaro found that many schools lacked a reliable supply of clean water for sanitation. Based on this inquiry, the members of several non-government organisations along with the local villagers laid hundreds of metres of new pipes and installed tanks and taps so that children at the schools could wash their hands before preparing food (see Source 3).

Source 3 Children at school near Mount Kilimanjaro using newly installed taps to wash their hands before preparing food

Check your learning 1.6

Remember and understand

1 Why is communicating an important part of a geographical inquiry?

2 List three ways you could communicate the findings of your geographical inquiry.

3 A self-evaluation checklist is one way to reflect on a geographical inquiry. What are two other ways?

4 Why are the findings of a geographical inquiry often useful to the community?

Apply and analyse

5 What do you most enjoy about other students' oral presentations? What do you least enjoy?

6 What geographical questions do you think began the inquiry that resulted in the new taps in the Tanzanian school shown in Source 3?

7 Why is it important that an action plan for change consider the issue of sustainability?

Evaluate and create

8 Imagine that you are preparing a PowerPoint presentation for your class on the decline of the glaciers on Mount Kilimanjaro. What are some of the main points you would raise in your presentation? What images from this toolkit would you use to illustrate these points?

9 Create a checklist to assess your map-drawing skills.

1.7 Fieldwork in geography

Why is fieldwork important?

A historian studying a period in the past will try to find primary sources of information such as letters or diaries to better understand that period. For geographers, the field is an essential primary source of data. Books, websites and maps can give you some information about a particular place but they are usually secondary sources of information. To really understand a landscape or issue you need to go and see it for yourself.

A field trip can be a fun and exciting experience as you spend time with your classmates in an interesting place. As well as being fun, field trips are an essential part of your geography course. This is because fieldwork:

- helps you to better understand how the world 'works' as it builds a bridge between what you learn in a classroom and the world outside that classroom.
- teaches you new skills, particularly in collecting information. Many of these skills, such as surveying and digital mapping, are in demand in the workplace.
- allows you to learn about the world in a new and different way. Not everyone learns well by reading books or answering questions in the classroom. Many students learn more by completing practical, hands-on activities such as fieldwork.
- gives you the opportunity to discover how other people feel about their environment and to compare this with your own values and ideas about your world.
- requires you to be organised and to work cooperatively with other people.

The skills associated with fieldwork

The aim of all **fieldwork** is to enable you to develop the skills of observation, information gathering, analysis and interpretation of different forms of data and communication of your results. The types of fieldwork you conduct will differ according to your chosen topic and the fieldwork site. All fieldwork is activity-based and inquiry-based. You will be:

- identifying different types of environments and the features within them
- describing what you see around you in geographical terms
- recording data from different sources
- sampling things like water quality and wind speed
- investigating why things are where they are
- comparing different features to see if there is a pattern
- calculating amounts such as water flow, number of different species of plants and animals, visitor numbers
- analysing different forms of data
- forming a more complete picture of the area you are studying
- communicating your findings.

All these activities are aimed at developing and improving your geographical skills and understanding.

Fieldwork locations and inquiry questions

Fieldwork can take place in many locations and for a wide variety of purposes. The best locations tend to be where change is happening before your eyes. Rivers and coasts are popular fieldwork locations because the constant movement of water in these places changes the natural environment, often resulting in a response from people. Shopping centres, parks and city streets are also popular because the constant movement of people creates patterns, flows and changes.

Source 1 You never know where fieldwork will take you! These geographers are using a drill to examine the age of the glaciers on Mount Kilimanjaro.

Source 2 Examples of fieldwork locations and inquiry questions for a range of topics

Unit	Fieldwork locations	Inquiry questions
Biomes and food security	Local farm	What crops or animals are grown on this farm? What makes this place suitable for this type of farming? How has the farmer changed the natural environment? What new technologies is the farmer using? How does this impact on the farm's productivity?
	Rural urban fringe	Is the city growing in this region? What are the main drivers of this growth? How has this impacted on food and fibre production in the past? What evidence is there for changing land use patterns?
Geographies of interconnections	Local business	How is this business connected to people in other places? How have new communication and information technologies changed this business? What is the size and shape of the region served by this business?
	Major shopping centre	How many businesses in this centre are foreign owned? Where are the goods offered in the shops in this centre manufactured? Where do the customers who use this centre come from? How is this shopping centre connected to people in other places?
Environmental change and management	River or stream	What natural processes are shaping this riverine or coastal environment? How do these natural processes impact on human activities? What human activities have changed the natural processes and environment in this place? How have these environmental changes been managed? How effective has this management been? What further management strategies could be used to better manage change in this place?
	Coast	
Geographies of human wellbeing	Two contrasting suburbs	What are living conditions like in these two suburbs? What are the similarities and differences? How can these differences be mapped? Why do these differences occur? How can wellbeing be improved in these places?
	Program to improve wellbeing	What are the aims of this program? Why does this program exist? How successful is the program in reducing inequalities in wellbeing? How could it become more successful? Could this program be applied in other regions and places?

Source 2 provides examples of fieldwork locations and inquiry questions that can be the beginning of an investigation at some of these locations.

Conducting successful fieldwork

Fieldwork is a type of geographical inquiry, so whenever you take part in fieldwork you will need to follow the stages that are outlined in this toolkit.

Stage 1 Observe, ask questions and plan

Begin by looking at an issue or location and compile a set of related inquiry questions that you would like to answer. There are some suggestions in Source 2 to get you started. Plan what information you will need to answer your key questions, how you will collect it and what equipment and skills you will need.

Stage 2 Collect, record, evaluate and represent data

Plan your fieldwork so that you can collect the evidence and data that you will need. There is a range of geographical skills that are well suited to field work. These include taking photos, drawing field sketches, conducting surveys and collecting data such as stream and pedestrian flows. You need to consider ethical principles such as people's right to confidentiality and the right to refuse to take part in a survey. If your class is planning a field trip to a natural environment such as a forest or beach, you will need to ensure you do not damage the environment by trampling on plants or animals, or by dropping litter.

Stage 3 Analyse data and draw conclusions

Analyse the evidence you have collected and look for patterns or clues that will help you to answer your inquiry questions. This is usually done in the classroom where you can more easily draw maps and graphs to interpret your information and reach some conclusions.

Stage 4 Communicate your findings

Communicate what you have found to an audience in the form of a written report, an oral presentation or an annotated visual display (AVD).

Stage 5 Reflect and take action

Think about your fieldwork findings and reflect on ways to improve your investigation process. Finally, decide on a course of action, if this is appropriate. This should take into account environmental, economic and social factors.

Source 3 An inner city urban renewal project

A fieldwork example: inner city renewal

In the following example, the Year 10 geography class at Gumtree College are investigating an urban renewal project near the central business district (CBD) in their capital city. Fifteen years ago the area was a vast neglected industrial site of old docks, cranes, sheds and railway lines. It has now been transformed into a residential and commercial hub with apartment blocks, office buildings, parks, shops, theatres, television studios and a major sporting arena. The Gumtree College students are investigating this area as part of their studies of environmental change and management of an urban environment.

Stage 1 Observe, ask questions and plan

Prior to their field trip, the students used the Internet and a promotional DVD to learn more about the area. Based on these observations they brainstormed a series of geographical questions that could form the basis of their inquiry. These included:

- How has this region changed over time?
- What are the causes of change in this region?
- What are the consequences of change on the built environment and on the natural environment?
- How are environmental changes in this region managed at present?
- How can environmental changes in this region be better managed in the future?

After some discussion, the students decided on the third question, but decided to modify it slightly to make it easier to study and measure. Their inquiry question

Source 4 Students completing a field sketch of an inner city renewal project

became 'What are the consequences of change in this region on the built environment?'

It was decided that the class would spend one full day in the region after travelling into the inner city by train. Following the field trip they would then spend time in class preparing a field report.

The students spent some time before the field trip planning what information they could collect and observe for their inquiry. They decided that they could investigate previous land uses in the area by accessing old photographs and maps. Then, while on the field trip, they would look for examples of changing land uses. This could include old buildings being demolished, or the appearance of new buildings, roads, bridges or other structures that were not in the old photographs and maps.

Stage 2 Collect, record, evaluate and represent data

The students researched the region and collected a series of photographs that showed the ways in which the region was used in the past and how these uses have changed over time. They found the National Library of Australia website (http://trove.nla.gov.au/) particularly useful. They printed some of these photographs and took them to the area when they visited on their field trip. Activities they completed on the field trip included:

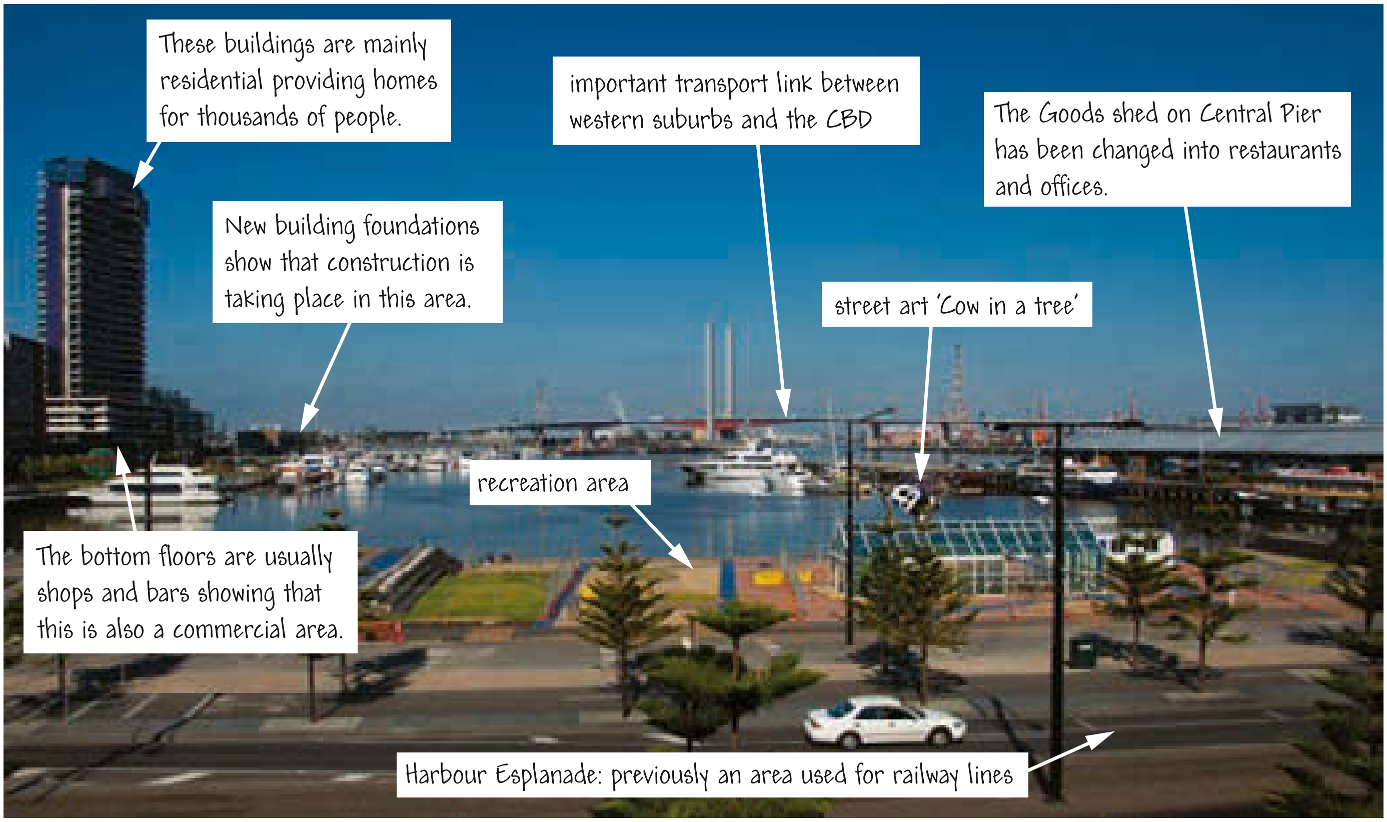
- completing a field sketch of new housing developments in a part of the area (see Source 4).
- taking geographic photographs and comparing these with old photographs (see Source 5). The photographs they took included images of a new train station, new sports stadium, new roads and new apartment buildings. Some students also photographed an old goods shed and old wharf facilities.
- mapping examples of land use changes on an outline map of the region. Included on the map were examples of buildings that have retained their original use, old buildings that have changed use, new buildings and areas cleared for new buildings.
- selecting examples of change as case studies. Some groups of students chose a new train station that had replaced an old one, some chose a new sports stadium that had been built on an area previously used for rail yards, and another group selected a goods shed that had been converted into restaurants. At each site, students listed the changes they observed and the impacts of these changes on surrounding areas. They also discussed the possible reasons for these changes. Some completed a field sketch of their case study.

Source 5 Students using old photographs of the region to observe change over time

Stage 3 Analyse data and draw conclusions

After completing their fieldwork, students returned to the classroom to make sense of the information they had collected and recorded. They used this information to make a series of conclusions about changes to the built environments that have occurred over time. In order to do this, they:

- constructed an overlay map to compare an old map of the region with the map they drew while on the field trip. They discovered that the shape of the river banks had changed little and that previous land reclamation areas had remained the same over the last 50 years. The rail yards had been moved to make way for the new sports stadium and the footprint of the new train station was slightly larger than that of the previous station. Many goods-handling areas and buildings from the previous industrial land use had been replaced with new apartment buildings and a large park. Roads from the CBD had been extended into the new precinct and new tram lines had been added.
- annotated their photographs of their case study sites to show how these sites had changed over time and the impacts of these changes on other areas (see Source 6 on page 36). Students concluded that change had been uneven, with some areas changing little, while others had undergone large-scale and dramatic changes. They also concluded that one of the driving forces for these changes has been the growth of the population of the city, increasing the demand for inner-city housing.


These buildings are mainly residential providing homes for thousands of people.
important transport link between western suburbs and the CBD
The Goods shed on Central Pier has been changed into restaurants and offices.
New building foundations show that construction is taking place in this area.
street art 'Cow in a tree'
recreation area
The bottom floors are usually shops and bars showing that this is also a commercial area.
Harbour Esplanade: previously an area used for railway lines

Source 6 An annotated geographical photograph completed as part of a geographical inquiry by students at Gumtree College

- concluded that the changes in this area have been largely positive as the area had become an unattractive wasteland prior to the urban renewal project. Some students felt that the area could be improved to make it more attractive for people to live there. They suggested that a school would be an asset in the area, as would more open spaces and recreation facilities like a water park or skate park.

Stage 4 Communicate your findings

Students completed field reports based on their geographical inquiry. Each student was required to complete a sketch book that included a range of visual and written material. Examples of visual material included an overlay map to show change over time and a range of annotated photographs. Written material included reports on the ways in which the area has changed over time and a description of the ways in which it is expected to change over the next 20 years.

Groups of students delivered presentations on their selected case studies. Most used ICT programs such as PowerPoint and Prezi to present photographs of their site. These were posted on the school website and discussion forum, and several parents from the school community added their own memories about the region as it was in the past. The class discussed the differences and similarities between each of the case studies.

Stage 5 Reflect and take action

Following the submission of their field reports students reflected on their findings and the methods they used to reach their conclusions. They decided that the key inquiry question they had chosen was a good one, although several students commented that it was difficult to work out why change had occurred in this place over time. They completed a self-evaluation checklist to reflect on the findings of their fieldwork (see Source 1 on page 30) and the ways in which they could improve.

Many students felt that the overlay map was a very good way to demonstrate how an area has changed over time and suggested that this technique could also be used on old photographs. The fieldwork was used as the basis for a class discussion about the positive and negative impacts of the observed changes on the natural environment.

Check your learning 1.8

Remember and understand

1 Why is it important to plan ahead for fieldwork?

2 What are some of the key advantages of fieldwork for geography students?

Apply and analyse

3 Name a place you are familiar with that could be investigated using some of the techniques used by the Gumtree College students. Work with a partner to decide on a variety of inquiry questions that could be used to guide a field trip to this location.

4 Gumtree College students worked in groups to study individual sites. What are some of the advantages of working in this way rather than as a whole class?

5 Examine Source 6. How might this annotated photograph help the students to answer their inquiry question?

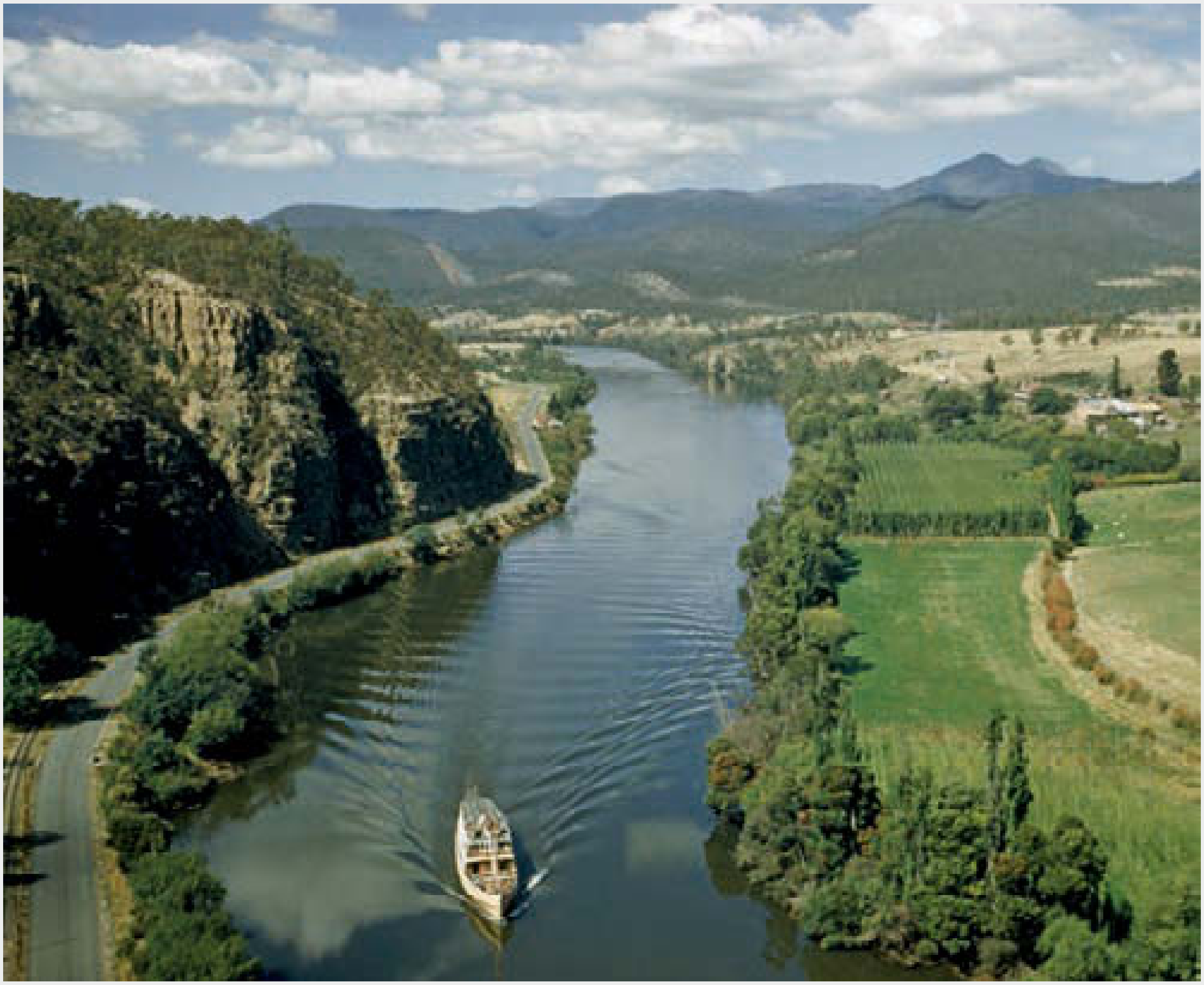
6 What other information could the students have collected on their field trip to help them answer their inquiry question?

Evaluate and create

7 Year 10 students at another school studied change in rivers as part of a geographical inquiry into environmental change and management. They planned a field trip to a local river (see Source 7).

   a What inquiry questions could they generate to guide their inquiry at this site?

   b Work in a small group to describe the steps you would undertake to explore one of these questions using fieldwork.



Source 7 This site is the planned location for a fieldwork trip to investigate environmental change and management of a river.

1.8 Careers in geography

In recent years there has been a marked increase in the number and range of jobs and careers that are linked to geography. This is likely to continue well into the future, due to a growing awareness of how important it is to understand our fragile environment. Many employers are also becoming more aware of the many skills that geographers have and the usefulness of these skills in a wide range of careers.

Many geographers find that their skills and expertise are in such demand that they can easily find employment all around the world. There are many jobs and careers that are linked to your study of geography at school. Some of these are listed in Source 1.

Source 1 Studying geography can lead to many interesting and exciting careers.

Working indoors	Sharing knowledge	Related opportunities
Urban planner	Cartographer, both printed and digital maps	Studying hazards and disasters
Meteorologist and climatologist	Teacher	Studying climate change
GIS specialist	Environmental educator	Archaeologist
Transport planner	Map editor and librarian	Agricultural scientist
Working with statistics such as census data	Tour guide	Researcher
Geomatic/ geospatial engineer	Writer/editor	Medical geographer/ health services planner
Regional planner	Journalist	Social data analyst
Geography analyst/ strategy consultant	Travel consultant	Developing new GIS applications

Working indoors

Not all geography jobs involve working outside. New information and communication technologies (ICT) have increased the number and range of geography careers that are completed indoors. Many of these are involved with planning future strategies and changes to the built environment. Planners are concerned about the ways in which different parts of a suburb or city fit together and the links between them. Like many geographers, planners increasingly use GIS systems and other ICT applications. A relatively new geography career is using geomatic engineering. This uses GPS, GIS, 3-D computer images, surveying, satellite images and photos in the field of engineering. It is one of Australia's fastest growing ICT fields.

Career profile: Lucy Johnson – urban planner

Lucy Johnson uses her geographical skills to help create and manage liveable spaces in a city council planning department. Residents and developers who wish to change the ways in which their properties are used must apply to Lucy and her fellow planners for permission. She assesses every proposal carefully to ensure that it does not adversely affect the natural environment or other local residents. 'Some proposals are met with great opposition from residents, who are extremely passionate about preserving their streetscapes and the character of their neighbourhood,' says Lucy. It is part of her job to find a balance between development and the protection of the character of the neighbourhood.

Lucy believes that 'town planning is crucial, not just in creating physical environments, but in sustainably changing the way in which we use land and accommodate population growth. Our resources are finite and we must ensure that future generations can live and prosper just as we do'. She also believes career opportunities in her chosen field are vast, varied and increasingly more important.

Source 2 Lucy Johnson is an urban planner who helps to create liveable spaces in Melbourne.

Sharing knowledge

Geographers are good communicators who are used to working in teams to solve problems and propose solutions. Many geographers have used these and other skills to share their knowledge with the community. There are many career opportunities in education, including teaching in schools and universities – even overseas. Other geographers work in publishing, as writers, journalists, editors or cartographers.

Source 3 This Australian geography teacher is educating Fijian kindergarten children about the importance of better nutrition and increased physical activity.

Exploring new ideas

The inquiry and research skills that are part of your geography course (including observing, questioning, interpreting, analysing and communicating) are in great demand in many industries. Many geographers are also researchers who explore new ideas and propose new ways of thinking about the world in which we live. These geographers are making new and exciting discoveries in areas such as climate change, reducing the impacts of disasters, the spread of diseases and food security. They are also in demand with mining and oil companies around the world (see Source 4).

Source 4 These geographers are using a 3-D visualisation and GIS to predict the most productive locations for oil drilling.

Check your learning 1.9

Remember and understand

1. Why is the number of careers in geography likely to increase in the future?
2. List three jobs you could do as a geographer if you wanted a job where you could explore new ideas.

Apply and analyse

3. What geography careers in Source 1 are connected to the concept of sustainability?
4. What skills do geographers have that make them useful in helping communities recover from natural disasters?
5. Why do you think a background in geography would be useful for an archaeologist?

Evaluate and create

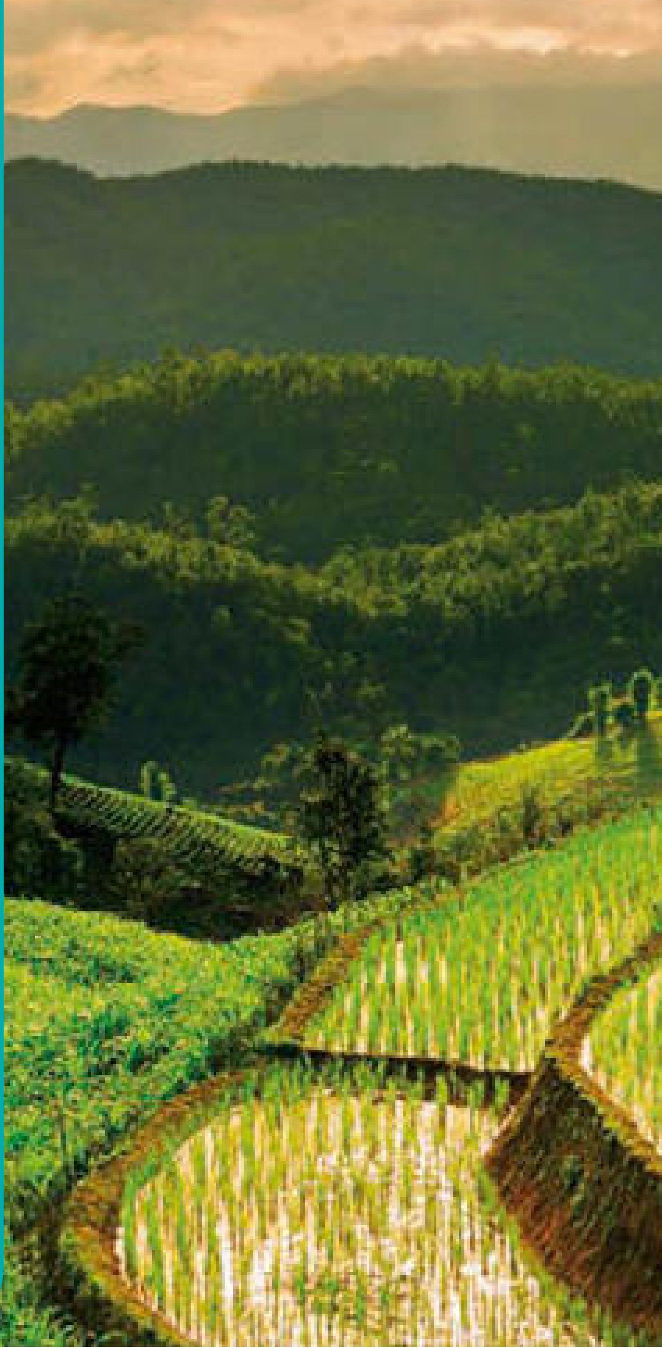
6. Select one of the careers from Source 1 that interests you. Research this career and prepare a one-page fact sheet that includes at least one picture. Include answers to the following questions in your career fact sheet:
    - a What qualifications are needed in this career?
    - b How does someone working this career use geographical skills and concepts?
    - c What aspect of this career do you think is most attractive?

Biomes and food security

Growing food

It may surprise you to learn that most of the world's people, including you, eat grass. It has been estimated that there are about 50 000 edible plants in the world, but of these, just 15 species provide 90 per cent of the world's food. Three types of plants – wheat, rice and corn – make up over half of all food eaten each year and they are all types of grass. Every day, foods from at least one of these types of grasses will be consumed in different countries all over the world.

These hillsides in southern China have had flat 'steps' cut into them to create flat land for growing rice, which is the most important staple food for more than half the world's population. Rice, like wheat and corn, grows in the **grasslands** regions of the world. Grasslands around the world share similar features and are therefore known as a single **biome**.



2A

What are biomes?

1 Grasslands are an important biome for producing food. There are about seven other main biomes on Earth. How many can you name?

2 Grasslands have a climate that supports the growth of grass. What do you think are some of the features of this climate?

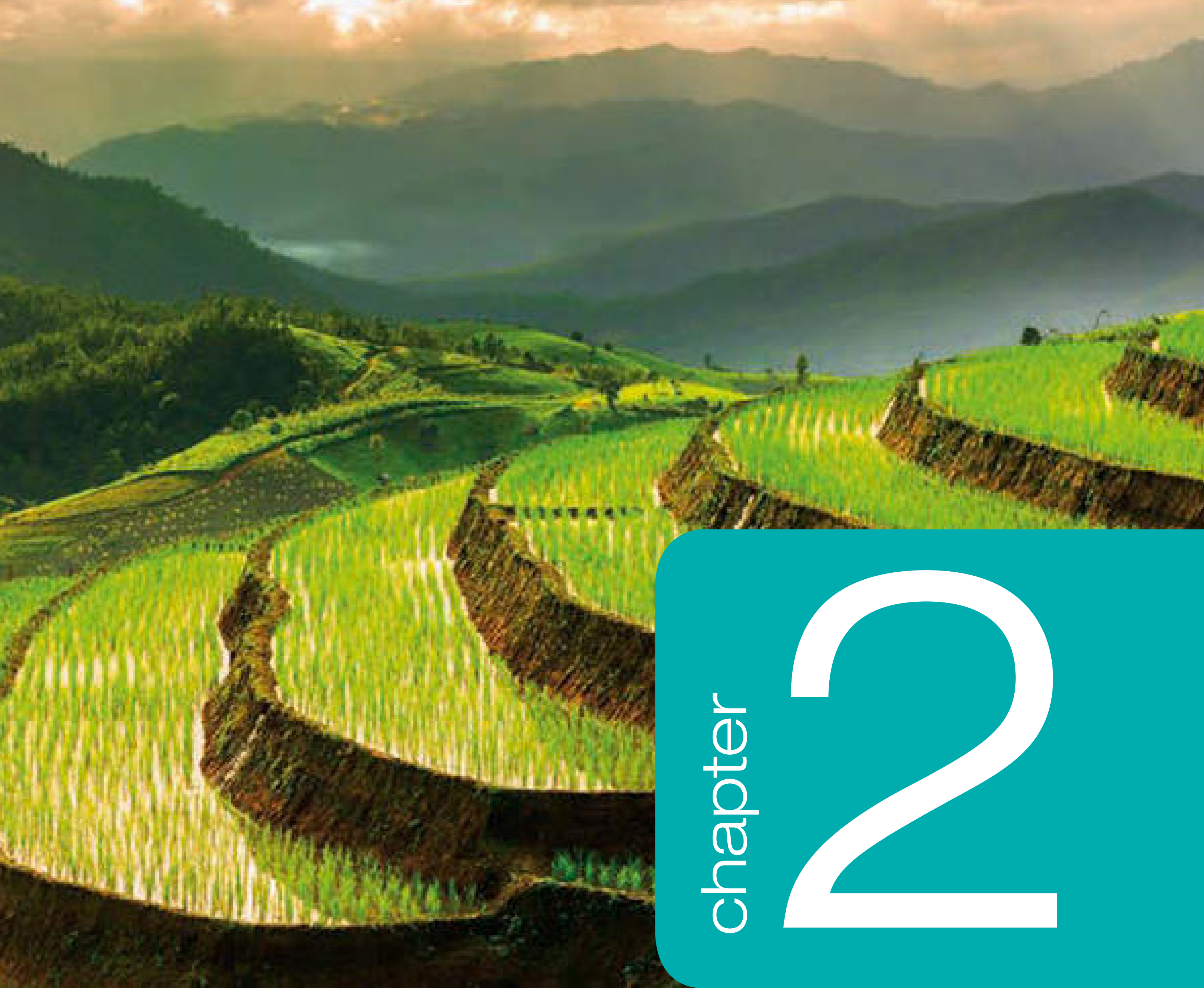
2B

Why do some biomes produce more food than others?

1 What features of the landscape in Source 1 make this a productive area for the growing of food?

2 Virtually all of Australia's rice is grown on the flat river plains of southern New South Wales. How will rice farming in this region differ from rice farming in southern China?

chapter 2



Source 1 These mountains in China have had 'steps' (known as terraces) cut into them to create flat areas for growing rice.

2C

How have biomes been altered by food production?

1 Describe the ways in which farming in this region of China has changed the natural features such as the shape of the land, the natural vegetation, the soil and the water.

2.1 The world's biomes

In order to study and understand the different environments on Earth, geographers divide the planet up into a number of distinct areas called biomes. Biomes share similar features (such as weather, climate, soil and landforms) and are classified according to the types of plants and animals that live there.

Each biome has particular features that make it unique (i.e. different to other biomes). For example, one biome might be hot and rainy most of the time, while another biome may be cold and dry most of the time. These different weather and temperature conditions mean that the plants and animals that live in these different biomes have adapted in different ways over time and interact with each other in unique ways.

Types of biomes

Not all geographers and scientists classify biomes in the same way. Some use a simple classification system that includes just two biomes:

- terrestrial biomes – those found on land
- aquatic biomes – those found in water

Others use a more precise classification system that divides these two main biomes up into as many as 15 separate subcategories. The most common types of terrestrial and aquatic biomes are listed in Source 1 and their locations around the world are shown in Source 4.

Features of different biomes

In certain biomes, such as **tropical forests**, there is an abundance of plant and animal life. This is because the weather conditions favour a huge variety of species. For example, a recent study of a Colombian rainforest, for example, found 596 bird species, 150 different species of amphibians and more than 200 species of mammals. This explosion of life is due to the year-round high temperatures and rainfall in the region.

At the other end of the scale are the **tundra** and the **polar lands**. These are the coldest biomes. The tundra biome circles the North Pole and because of its location, it has very low temperatures and short growing seasons. As a result, there is very little plant diversity. In fact, the word 'tundra' means 'treeless plain'.

The polar lands biome is even colder than the tundra. It includes the continent of Antarctica, which contains virtually no native species of plants or animals.

Source 1 Types of biomes

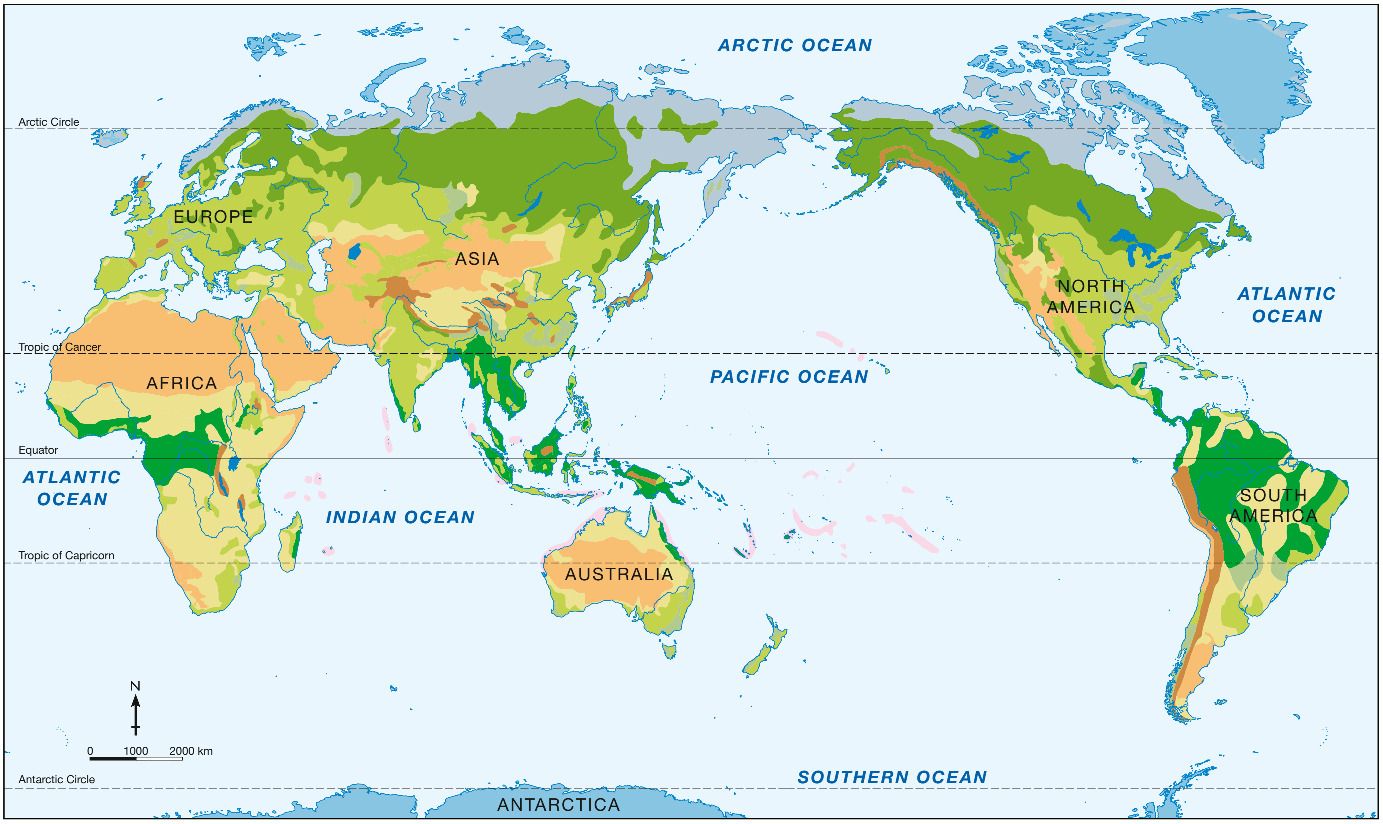
Types of terrestrial biomes (land biomes)	
Colder and dryer	Polar lands
	Tundra
	Boreal forest
	Mountain vegetation
	Temperate forest
	Grasslands
	Desert
Warmer and wetter	Tropical forest
Types of aquatic biomes (water biomes)	Freshwater
	Marine
	Coral reefs

Source 2 The tropical forest biome is home to a huge variety of different plant and animal species because of warm temperatures and high rainfall.

Biome	Characteristics
Polar lands	Very cold and dry, very little animal life, almost no vegetation
Tundra	Cold, short growing seasons, no trees
Boreal forest	Cold, wet, filled with coniferous trees
Mountain vegetation	Cold and windy, low lying vegetation that won't be blown over
Temperate forest	Mild temperatures and wet weather, lots of trees and animal life
Grasslands	Vegetation is mainly grasses that support many types of animals. Can be very dry or very wet, depending on location
Desert	Dry, almost no plants, often located in the centre of a continent (away from the coast)
Tropical forest	Warm, wet, lots of plant and animal life
Freshwater	Low levels of (or no) salt in water, supports animal and some aquatic plant life
Marine	Made up of three zones that get colder and darker as the water gets deeper. Most marine life exists closer to the surface
Coral reefs	Found in warmer waters, often close to land, filled with coral and aquatic life that depend on coral (such as fish)

Source 3 Characteristics of the different biomes

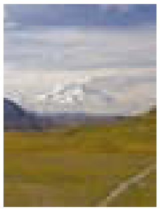
WORLD: BIOMES


ARCTIC OCEAN
Arctic Circle
EUROPE
ASIA
NORTH AMERICA
ATLANTIC OCEAN
Tropic of Cancer
AFRICA
PACIFIC OCEAN
Equator
ATLANTIC OCEAN
INDIAN OCEAN
SOUTH AMERICA
Tropic of Capricorn
AUSTRALIA
N
0 1000 2000 km
Antarctic Circle
SOUTHERN OCEAN
ANTARCTICA

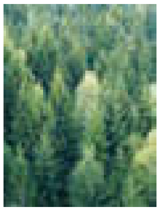
LEGEND:
TERRESTRIAL BIOMES

■ Polar lands

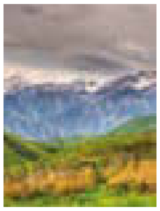
■ Tundra



■ Boreal forest

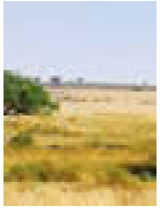


■ Mountain vegetation

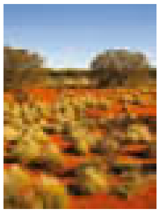


■ Temperate forest

■ Grasslands



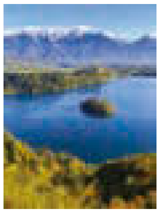
■ Desert



■ Tropical forest

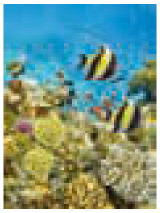
AQUATIC BIOMES

■ Freshwater



□ Marine

■ Coral reefs



Source 4

Source: Oxford University Press

Check your learning 2.1

Remember and understand

1 What is a biome?

2 What is the difference between terrestrial biomes and aquatic biomes?

3 What does the word ‘tundra’ mean? Where is the tundra biome located?

Apply and analyse

4 Where are the world’s tropical forests located? Why do you think they are located in these places?

5 Describe the distribution of different terrestrial and aquatic biomes in Australia.

Evaluate and create

6 Work with a partner to classify the eight terrestrial biomes shown in Source 4 in order from the biome with the most species to the biome with the least species. Compare your results with other groups in your class. Were there some rankings you all agree on? Were there others that no one could agree on? Discuss the reasons for this.

2.2 Forest biomes

There are two main types of forest biomes – **boreal forest** and **temperate forest**.

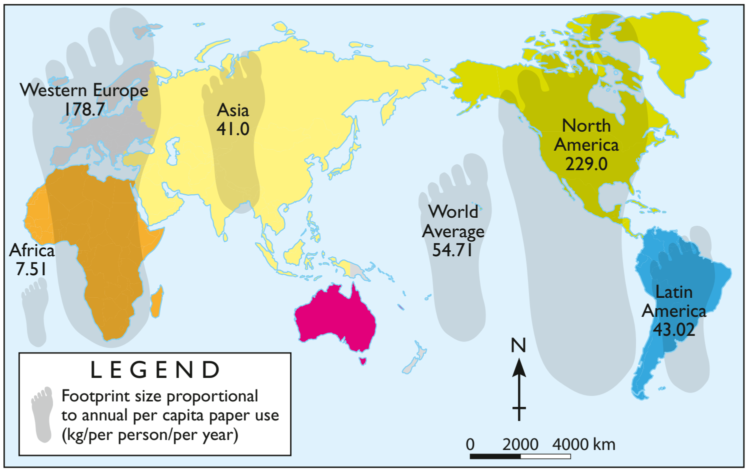
Boreal forest biome

The largest biome on land is the boreal forest biome. Boreal forest, sometimes called **coniferous forest**, is made up of evergreen trees that have needle-like leaves and cones, such as pine cones. This biome is home to a low number of species of plants when compared to other forests in more temperate regions or in the tropics.

The boreal forest biome covers vast areas in the northern hemisphere, between the Arctic tundra and the north of Europe, Asia and North America. While the climate in these regions is not as harsh as that experienced in the polar lands or on the tundra, it is still cold enough to limit the number of plant and animal species that can survive, and winter is long. In fact, the boreal forest's longest season is winter. Average temperatures fall to about –15°C and snow is common. In summer, which lasts only one to three months, temperatures climb towards 20°C and humidity is relatively high.

Source 1 This paper mill is situated by a large body of water. Paper is made by pulping woodchips from logs and mixing the pulp with water.

WORLD: AVERAGE PAPER CONSUMPTION



Source 2 Source: Oxford University Press

The plants and animals that survive in this biome must be able to handle great variations in rainfall and temperature, as well as large areas of permanently frozen ground and poor soils.

Threats to the forest

Boreal forests have provided many important resources for people both in the past and the present. Historically, wood for construction, heating and cooking came from boreal forest trees. More recently, boreal forests have supplied the increased global demand for cheap wood and paper, spurred by population growth and a change in global markets.

However, many boreal forests are under threat. One of the main threats to the boreal forest biome is the clearing of trees to make way for oil and gas exploration. It is estimated that huge reserves of petroleum products lie under the forests, and the ever-increasing demand is pushing exploration into these areas.

In Canada and Russia, forests are logged extensively and many are being attacked by insect plagues and acid rain. Forests are also at risk from bushfires during the summer period. **Climate change** is causing some forest areas to spread further north. Rising temperatures in the Arctic region have seen the edge of the boreal forest slowly advancing northward, replacing tundra in some places.

Source 3
The spectacular deciduous trees in the town of Bright in Victoria's high country are mainly oaks and elms, native to England half a world away.

Temperate forest biome

Between the tropics and the cold polar regions is a large zone that is neither excessively hot nor excessively cold. For this reason it is called the temperate zone. The forests that grow in the temperate zone experience a range of seasonal climate conditions. In winter, temperatures may fall below freezing and in summer they can climb above 40°C. In some temperate forests, rain falls reliably throughout the year. In others, there are more distinct wet and dry seasons.

Most of the world's population lives in the temperate zone and this has had a huge impact on the temperate forest biome over time. As the world's population spread and grew, temperate forest biome areas gradually became smaller. Cities were formed on land that was once covered in forest, and trees were cut down to clear land and to provide fuel and building materials. The forests gradually disappeared from these places. This happened in Europe, then in Western Asia and North America. Currently, little temperate forest remains in some of these places.

However, as explorers set out from Europe to colonise new lands, they often carried with them seeds and saplings of the trees with which they were familiar. They planted these in the places they travelled to, such as Australia, New Zealand and South Africa, and in this way temperate forest trees were spread around the world.

Check your learning 2.2

Remember and understand

1 Describe the temperature variations experienced in the boreal forest biome.

2 How have trees from temperate forests spread around the world?

Apply and analyse

3 What are some of the differences between boreal and temperate forests? What are some of the similarities?

4 Use the map in Source 4 on page 47 to compare the distribution of temperate and boreal forests.

5 Why do you think the consumption of paper has increased dramatically in the last 50 years?

6 What influence has this growth in demand for paper had on the world's forests?

Evaluate and create

7 Examine Source 2, showing the average consumption of paper by person in each continent.

- a Who are the biggest paper users? Who are the smallest?
- b Australian consumption is not shown on this graphic. Draw the size you estimate Australia's paper footprint to be compared to one other continent. Explain how you decided on the size of Australia's footprint.

2.3 The grasslands biome

In places that are too dry for forests and too wet for deserts lies a biome dominated by shrubs and grasses – the grasslands biome. In different parts of the world, the grasslands biome is referred to by a few different names. In Africa, grasslands are often referred to as **savannas**. In North America, they are often called **prairies**, and in parts of Siberia and south-eastern Asia, they are often known as **steppes**.

Much of the world's food and fibre comes from plants and animals that live in the world's grasslands. Rice, wheat and corn, all grasses, provide the bulk of the human population's food, and many animals that are farmed to provide meat and milk also live in the grasslands biome.

Much of Australia can be considered grassland and many of our native animals, such as kangaroos, wallabies and wombats, thrive in this biome.

In Africa, too, grasslands dominate, covering more than half the continent. In this landscape the grassland is dotted with individual trees, providing little cover for the wildlife that live there.

These grasslands support a variety of plant-eating mammals as well as predators that feed off them. The animals living here have developed an amazing array of physical and behavioural changes to adapt to the challenges of the open environment. The zebra's stripes, for example, make it difficult for a predator to see it clearly. The giraffe, one of the larger kind of grasslands inhabitant, has evolved in such a way that its long neck allows it to source food at the tops of trees. Many other animals that live in the grasslands are nocturnal, allowing them to avoid the main heat of the day and venture out at night to hunt and gather food. These animals include the prairie dog, barn owl and gray wolf, which scout for food at night. Smaller mammals also venture out in the cool of the night, often when the moon is full or near full, to allow them to better spot animals that may be seeking them out as prey.

Many grasslands around the world have changed greatly over time. Some of these changes are the result of human activities, such as introducing grazing animals to a grasslands environment. Grazing animals such as cattle, sheep and goats compete with native species for food and often trample the ground, damaging the roots and soil structure.

Source 1 Elephants on the savanna in Africa

Source 2 A wild horse on the steppe in Asia

Source 3 A bison on the prairie in North America

keyconcept: Change

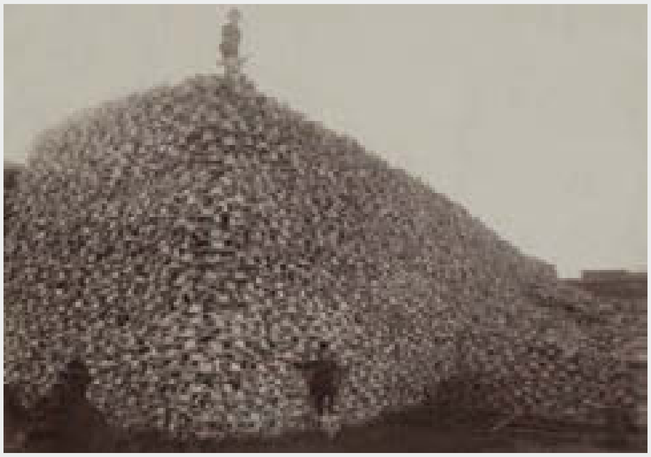
The North American prairie

The prairies of North America were once dominated by Indigenous American tribes, such as the Cheyenne, Apache and Comanche tribes.

The Comanche lived in the grasslands in the region that now includes Texas, Oklahoma and Kansas, in the United States. They were typical of many of the Indigenous tribes of North America. As their main food source was bison, they followed the great herds across the plains, as the bison travelled to find the best grazing. When the bison stayed in one location to eat the plentiful grass, the Comanche set up temporary villages. Then they moved with the bison when better grazing lands were needed. The bison provided more than food for the Comanche, their hides were used to make clothing and the distinctive pyramid tents, called tepees.

Some tribes hunted bison by building fences from fallen logs, then herding the bison into a small area where they were killed with arrows and knives. Herding massive animals such as bison was difficult for tribesmen on foot. However, life for Native Americans changed dramatically with the arrival of European explorers, and their horses, about 400 years ago.

Many tribes, including the Comanche, quickly realised the potential of the horse in their culture and soon became expert horsemen. As well as being faster and more nimble than a bison, the horse had one other great advantage for the grasslands tribes. Like bison, horses are grazing animals that eat grass. This meant that the tribes could move easily across the plains following the gradual movement of the bison herds, the grasslands now feeding both bison and horses.



Source 4 It is estimated that 30 million bison lived in North America in the 1500s. Within 400 years this had fallen to about 1000. In this photograph, taken in the 1870s, a pile of bison skulls waits to be crushed for fertiliser.

But as European ranchers moved across the prairies through the 16th to 19th centuries, the numbers of Native Americans and their way of life gradually disappeared. Much of the vast grasslands of the prairie were turned into grazing land and farmland by the European settlers. However, the open plains remain an iconic image of American history and the American pioneering spirit. For more information on the key concept of change, refer to page 10 of 'The geography toolkit'.

Check your learning 2.3

Remember and understand

1 Why is the grasslands biome important for human populations?

2 What changed the grasslands of North America?

Apply and analyse

3 Examine the map in Source 4 on page 43 showing the distribution of the world's biomes.

  a Describe the distribution of grasslands in each continent.

  b What relationship do you notice between grasslands and human environments such as cultivated land and urban areas?

  c Why does this relationship occur?

4 Examine the three images of grasslands (Source 1, Source 2 and Source 3) from different parts of the world. In which countries do you think each of these photographs was taken? Give some reasons for your answers.

Evaluate and create

5 Compare the images of the grasslands with the pictures of a desert in Source 3 on page 52. What are some of the main differences between the two biomes? Explain why these differences occur.

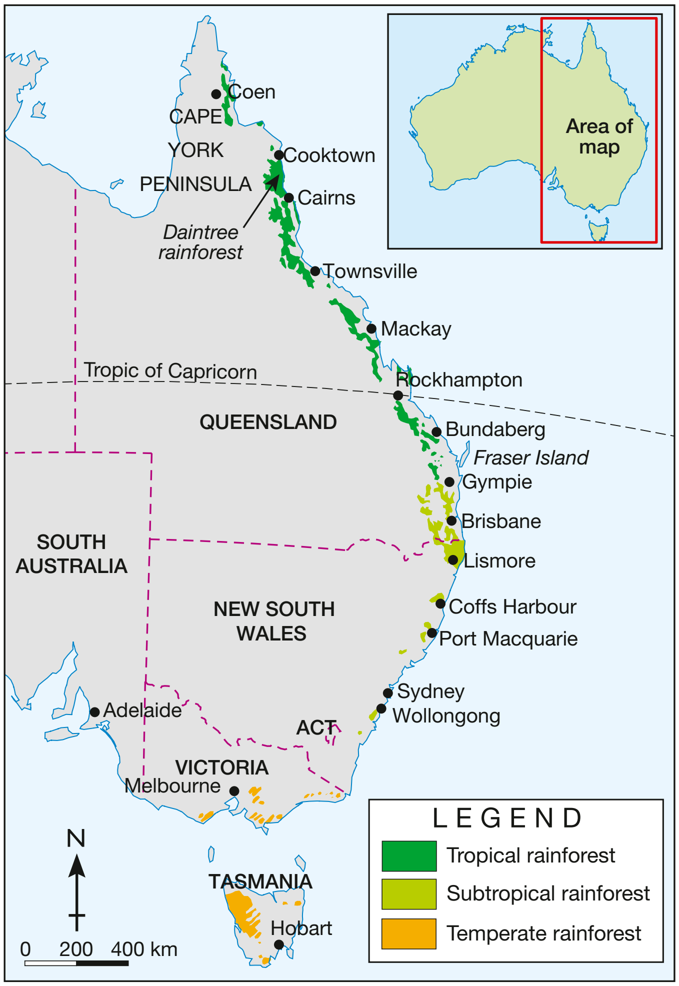
2.4 The tropical forest biome

It is estimated that about half of all the plant, animal and insect species in the world live in tropical forests. Many of these are among the wettest places on Earth and are therefore known as **rainforests**. They can be considered to make up the world's richest biome and the abundance of life can be astounding. In Brazil, for example, researchers found that a single pond contained more fish species than exist in all of Europe's rivers. In Peru, a single tree was found to contain 43 ant species; this is more than the total number in all of the British Isles. One hectare of South American rainforest may contain over 750 different types of trees and one-fifth of all of the world's birds live in the Amazon rainforest. This explosion of life is due to the ideal growing conditions that occur in the tropics.

These places experience the most stable climate conditions on the planet with virtually no seasonal changes in rainfall, temperature or available sunlight throughout the year. Most days are the same in the rainforest: hot and wet. It rains virtually every day, often in torrential downpours. The temperature hovers between about 26°C and 32°C all year round.

Source 1 Tropical rainforests cover the slopes of many Queensland mountains and experience Australia's highest rainfall. The Daintree rainforest near Port Douglas is the oldest continuously surviving rainforest in the world.

EASTERN AUSTRALIA: RAINFOREST REGIONS


Area of map
Coen
CAPE YORK PENINSULA
Cooktown
Cairns
Daintree rainforest
Townsville
Mackay
Tropic of Capricorn
Rockhampton
QUEENSLAND
Bundaberg
Fraser Island
Gympie
Brisbane
Lismore
SOUTH AUSTRALIA
NEW SOUTH WALES
Coffs Harbour
Port Macquarie
Sydney
Wollongong
Adelaide
ACT
VICTORIA
Melbourne
N
TASMANIA
Hobart
0 200 400 km
LEGEND
🟩 Tropical rainforest
🟩 Subtropical rainforest
🟧 Temperate rainforest

Source 2 Source: Oxford University Press

Australia's rainforests

Though much of Australia was once covered in forest, now there are only a few small pockets near the east coast (see Source 2). Rainforests now make up only 2.5 per cent of Australia's remaining native forest. This surviving forest, however, is a real Noah's Ark for many plant and animal species, many of which exist nowhere else in the world. There are more than 1000 species of plants in Australian rainforests, of which about 700 exist nowhere else. These plants support thousands of insect species, hundreds of reptile and bird species and nearly 90 different types of mammals. The subtropical rainforests of New South Wales and Queensland are also internationally recognised for their direct links to the world's first flowering plants, which occurred about 100 million years ago.

The gifts of the rainforest

Rainforests have provided humans with many resources for thousands of years. These resources are known as **ecosystem services**. Rainforests provide many services, including the ones described in Source 3.

Ecosystem services

About 80% of the plants we eat began in the world's tropical rainforests. Potatoes, corn, rice, avocados, oranges, bananas, coffee, chocolate and hundreds of other foods are rainforest plants.

About 25% of the drugs we use to treat illnesses, from leukaemia to headaches, come from rainforest plants.

Rainforest plants take in carbon dioxide and produce oxygen. The Amazon rainforest alone is thought to produce about one-fifth of the world's oxygen.

Rainforests regulate the Earth's temperature and rainfall, and hold much of the world's fresh water.

Rainforests in Africa, Asia, South America and Australia are home to Indigenous peoples.

Products such as toothpaste, golf balls, rubber tyres, paints, cosmetics, steroids and cork are all made from rainforest plants.

Source 3 A scarlet macaw flies over the world's largest rainforest – the Amazon. The Amazon provides many ecosystem services.

Source 4 Temperate rainforests are found in the temperate climate zone. Like tropical rainforests, they receive an abundance of rain and take in high amounts of carbon dioxide. However, they do not have the same levels of biodiversity as the tropical rainforests. The temperate rainforests of Western Australia, such as these found in Walpole-Nornalup National Park, are characterised by diverse plant life and towering trees.

Check your learning 2.4

Remember and understand

1 Use the map showing the world's biomes (Source 4 on page 43) to describe the distribution of the world's tropical forests.

2 What are some of the links between the world's climate and rainforests?

Apply and analyse

3 Describe the distribution of Australia's rainforests. Refer to particular places and states and use compass **directions** in your answer.

4 What are some of the differences between tropical and temperate rainforests?

Evaluate and create

5 Why do you think the amount of rainforest in Australia has decreased so much? Consider both natural processes and human activities.

6 What information from these pages would you use to explain the importance of rainforests?

7 Clearing of rainforests for farming, mining and urban development makes the tropical forest biome one of the world's most endangered.

   a How might the clearing of a rainforest impact on people who live in it or nearby?

   b How might it impact on people living in places that are further away?

2.5 Going with the flow in the rainforest

A rainforest, like all **ecosystems**, is a very dynamic place. Complex relationships between the climate (including rainfall, temperature, wind, humidity and sunlight), the shape of the land, soils, plants and animals have developed over millions of years and keep the rainforest alive and flourishing. A change to any part of the ecosystem can have devastating consequences for the whole ecosystem. The cross-section in Source 1 shows some of the flows of energy (intangible sources of power or nutrition) and matter (tangible sources of power or nutrition) that exist in a rainforest.

Changes in the rainforest

It might seem logical that rainforests must have a deep rich layer of soil to support the great trees and other plants that flourish there. However, this is not the case. The heavy rain washes the nutrients of the soil deep into the ground where the roots of the plants cannot access them. The rainforest trees are able to survive in these soils because they have developed wide-spreading roots and because the warm temperatures in the tropics allow leaf litter – dead plant material that has fallen to the ground – to be quickly recycled into plant nutrients.

When the rainforest plants are cleared to make way for farms, these nutrients are quickly lost and the soil becomes exposed to the heavy rain and tropical sun. Farmers often find, contrary to expectation, that their plants do not thrive in these conditions as the soil provides few nutrients which the plants need.

skill**drill**

Creating a flow diagram

Geographers use **flow diagrams** to show the movement, sequence or stages in a process. Flow diagrams can be created by adding text and arrows to an image, or by creating text boxes from scratch, joined by arrows to describe the flow of a process.

Follow these steps to create a flow diagram.

Step 1 Decide on a process you want to describe. For example, you might want to describe the life of an apple, from seed to compost stage.

Step 2 Jot down the steps you wish to highlight in the process. Try to keep each step clear and separate.

Step 3 Create a text box for each step, and write or insert your text in each box.

Step 4 Link each step with an arrow showing the direction of the process. Read through your diagram to make sure the steps are logical and that you haven't missed any important parts of the process you are aiming to describe.

You can also create a flow diagram by adding your arrows and text to an existing image, following the process described here.

Apply the skill

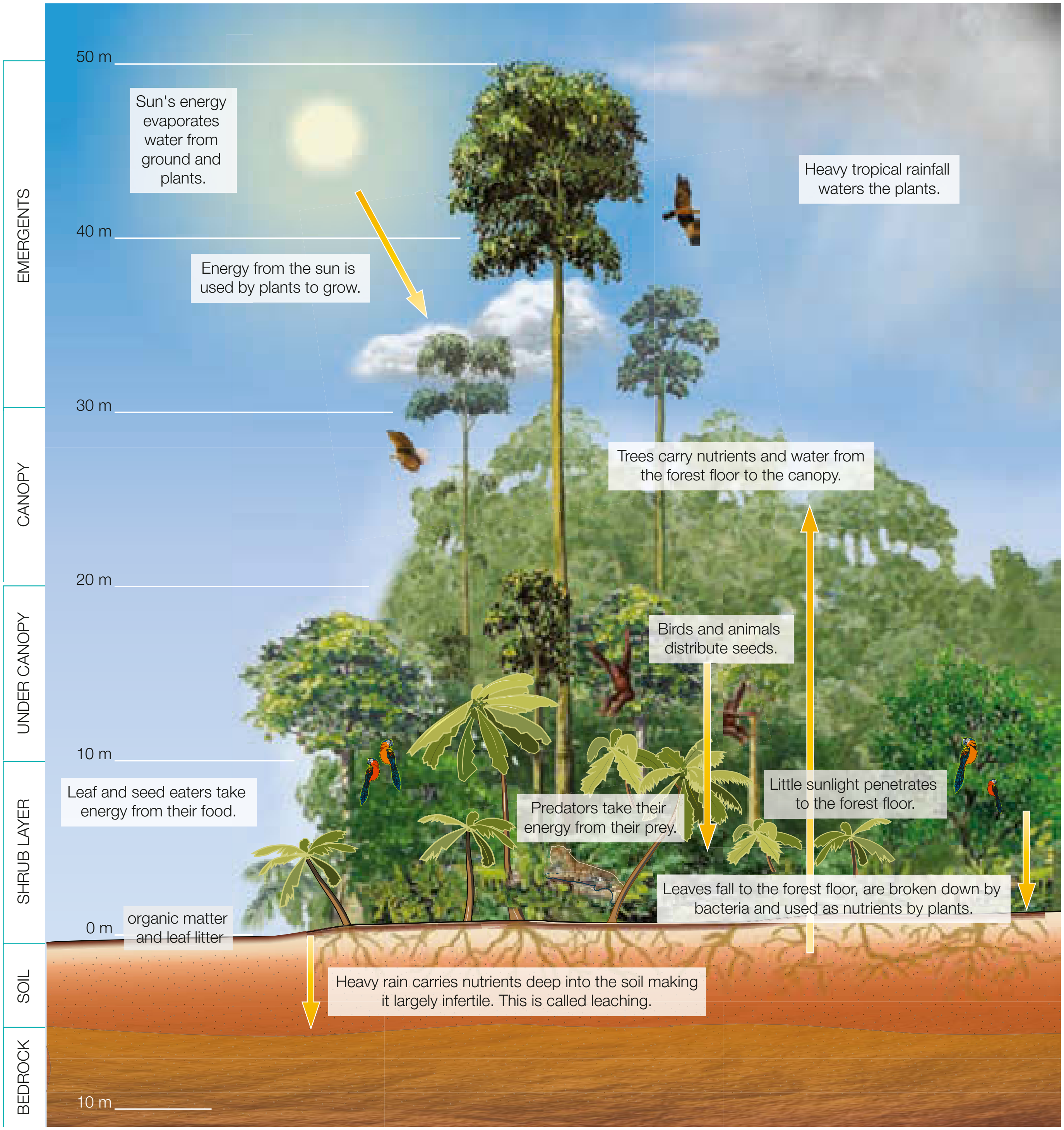
1 Follow the steps above to construct a flow diagram of your own. Use the picture and labels of the rainforest in Source 1 to describe the flow of energy and matter that would occur between the different elements of the rainforest and the plants and animals that inhabit it.

Check your learning 2.5

Remember and understand

1 Look at the illustration of the rainforest in Source 1 and identify an interaction that takes place between animals and plants.

2 What effect do you think there would be on the rainforest ecosystem if this interaction no longer occurred?


EMERGENTS
CANOPY
UNDER CANOPY
SHRUB LAYER
SOIL
BEDROCK
50 m
40 m
30 m
20 m
10 m
0 m
10 m
Sun's energy evaporates water from ground and plants.
Energy from the sun is used by plants to grow.
Heavy tropical rainfall waters the plants.
Trees carry nutrients and water from the forest floor to the canopy.
Birds and animals distribute seeds.
Leaf and seed eaters take energy from their food.
Predators take their energy from their prey.
Little sunlight penetrates to the forest floor.
Leaves fall to the forest floor, are broken down by bacteria and used as nutrients by plants.
organic matter and leaf litter
Heavy rain carries nutrients deep into the soil making it largely infertile. This is called leaching.

Source 1 Cross-section of a tropical rainforest

Apply and analyse

3 Why are rainforest soils poor in nutrients?

4 How have rainforest trees adapted to the poor soils in the rainforest?

5 Describe how water is moved through the rainforest.

Evaluate and create

6 What changes of movement in energy and matter would result if the trees and vegetation in Source 1 were cleared to make way for farming land? Consider the living and non-living inhabitants of the ecosystem.

2.6 Australia's biomes

Australia is one of the world's largest countries. The northern part of Australia lies in the tropics, while the southern part stretches towards Antarctica. The sheer size of the land mass which spreads across much of the Earth's southern latitudes means that there is a wide variety of climates and landscapes that form many biomes across Australia.

Many of Australia's original biomes have been changed by human activities. More than half of Australia's total land area is now used for food production, particularly sheep and cattle farming, covering 430 million hectares of land. This has resulted in significant changes to vegetation, land and water across much of the country. Source 1 shows Australia's original biomes before they were changed by human activities.

Source 2 About one-third of Australia's total land area is used for cattle farming.

Australia's deserts

Australia is the second driest continent in the world, after Antarctica. The combined area of the 10 biggest Australian **deserts** makes up about 18 per cent of the total land area of our 'wide brown land'. We can also describe Australia as arid or semi-arid because 70 per cent of the continent receives less than 500 millimetres of rainfall each year. This low rainfall has resulted in large desert areas across much of Australia.

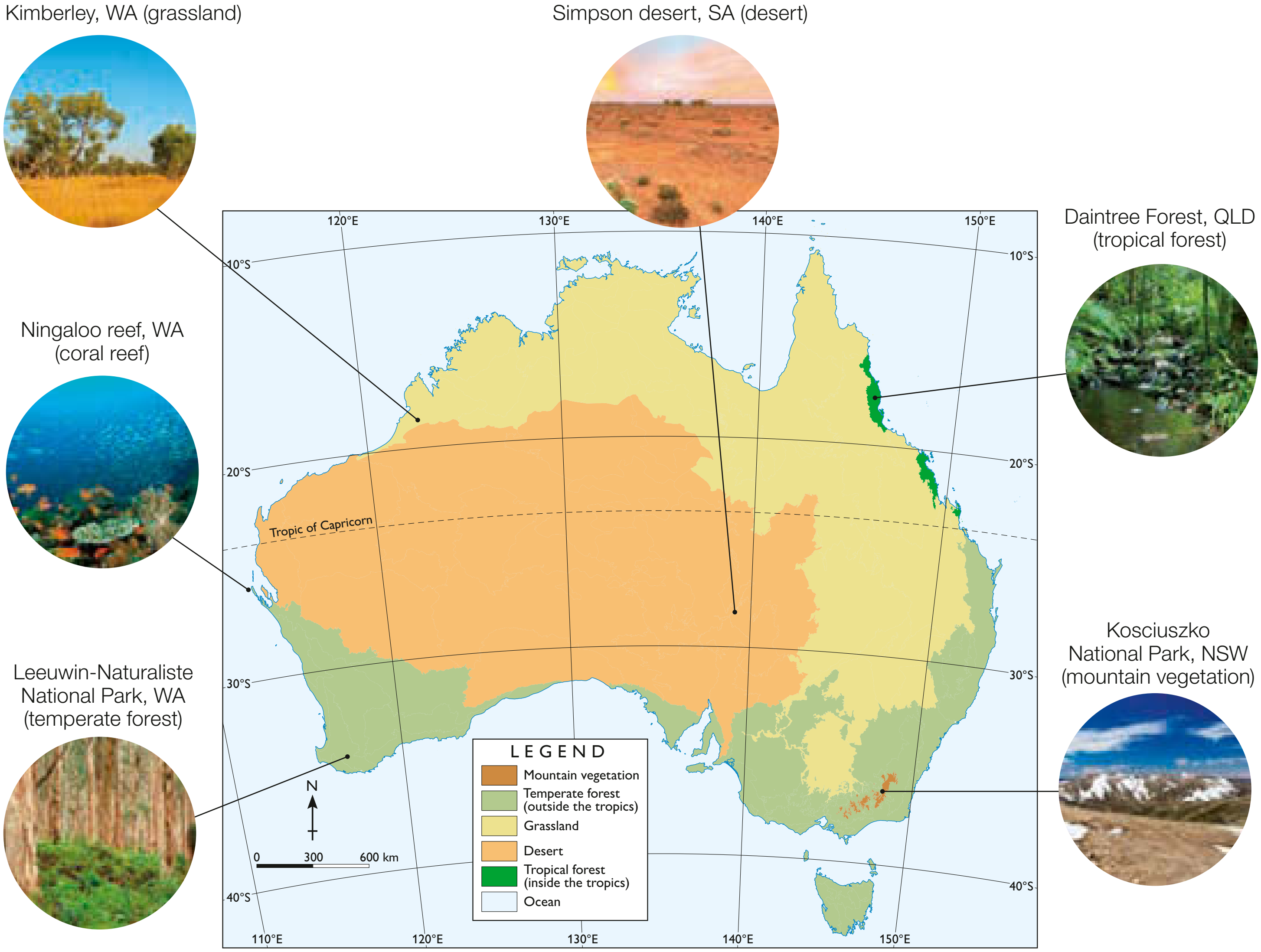
Many people think of deserts as being entirely composed of large sand dunes, with the occasional date palm or cactus the only sign of life. This image may come from movies, or pictures they have seen of deserts around the world.

However, while the Sahara Desert in Africa does have date palms and sand dunes and most North American deserts have cactuses, there are variations within the desert biome. Some desert areas in Australia have large areas of red dunes, for example, but some are covered in vast areas of stones, called gibber plains (see Source 3).

In most of Australia's desert areas, grasses and low shrubs dominate the landscape (see Source 3). In the tropical deserts north of the Tropic of Capricorn, spinifex and tough Mitchell grass cover much of the ground. South of the tropics, woodland deserts are more common, with tough acacia trees, such as the mulga and witchetty bush, in evidence.

AUSTRALIA: BIOMES

Source 3 Stony plains in the Simpson Desert


Kimberley, WA (grassland)
Simpson desert, SA (desert)
Daintree Forest, QLD (tropical forest)
Ningaloo reef, WA (coral reef)
Kosciuszko National Park, NSW (mountain vegetation)
Leeuwin-Naturaliste National Park, WA (temperate forest)
Tropic of Capricorn
10°S
20°S
30°S
40°S
110°E
120°E
130°E
140°E
150°E
N
0
300
600 km
LEGEND
Mountain vegetation
Temperate forest (outside the tropics)
Grassland
Desert
Tropical forest (inside the tropics)
Ocean

Source 1

Source: Oxford University Press

Check your learning 2.6

Remember and understand

1 Why is there a wide variety of biomes in Australia?

2 What is the dominant natural biome where you live? Describe some of the ways in which this has been altered by human activities.

Apply and analyse

3 Compare Australia's biomes in Source 1 with the world's biomes in Source 4 on page 43 and answer the following questions.

  a Which biomes do not exist in Australia?

  b Give a reason for each of these biomes being 'missing' in Australia.

4 How has latitude influenced the distribution of biomes in Australia?

Evaluate and create

5 The world biomes map (Source 4 on page 43) shows large areas of desert, while the three images in Source 3 show us that there are significant variations in landscape within the desert biome.

  a What are the limitations of describing places according to their dominant biome?

  b Why do you think there are such variations within the desert biome?

  c Research one of the other biomes to find out if such variations exist in that biome's regions too.

6 Construct a collage or create a PowerPoint or Prezi display of Australia's major biomes. Include at least one image of each biome.

2A rich task

The Kokoda Trail

Papua New Guinea is a country with vast areas of rainforest. The forest covers the slopes of rugged mountain ranges such as the Owen Stanley Range. The Kokoda Trail crosses this range and was the location of fierce battles between the Australian and Japanese armies in World War II.

The area is notable for steep mountainsides, dense rainforests and heavy rainfall. This turns the trail into a sea of mud and makes progress along it very difficult. Many Australians attempt to walk the trail every year to achieve personal goals, which perhaps include gaining an appreciation of the difficulties faced by the soldiers during the war.

skill**drill**

Estimating gradient and aspect on topographic maps

Estimating gradient (angle of the slope) and aspect (direction of the slope) is an important skill for geographers to master.

Estimating gradient

Using a topographic map, it is possible to estimate the gradient between two points, by following these steps.

Step 1 Determine the height of the two points. For example, examining Source 2, Owens Corner (186, 530) is at 600 metres and The Gap (241, 588) is at 2190 metres.

Step 2 Estimate the difference in height between these two points (known as the rise): 2190 – 600 = 1590.

Step 3 Estimate the straight line distance (known as the run) between these two points using the line scale. This is 40 km or 40 000 metres in this example.

Step 4 Divide the rise by the run and multiply this by 100: (2190/40 000) × 100 = 5.5% slope.

Estimating aspect

The aspect refers to the compass direction that the slope is facing. This is also simple to work out by following these steps.

Step 1 Using the information we found out when estimating the gradient we can tell that the terrain slopes down from The Gap (at 2190 m) to Owens Corner (at 600 m).

Step 2 Imagine an arrow from The Gap to Owens Corner and estimate the direction of this arrow using the north arrow. This arrow would be pointing south-west. The aspect therefore is south-west.

Apply the skill

1. Estimate the aspect and gradient of the slope between The Gap and Kokoda (241, 638).
2. Is this slope less steep or steeper than the slope between Owens Corner and The Gap?
3. Estimate the gradient and aspect for the slope between The Gap and Mt Kenevi (266, 584).
4. Estimate the gradient and aspect for the slope between The Gap and Mount Victoria (197, 635).
5. Provide three pieces of evidence that this landscape is very rugged and mountainous.
6. Estimate the total length of the Kokoda Trail from Owens Corner to Kokoda.

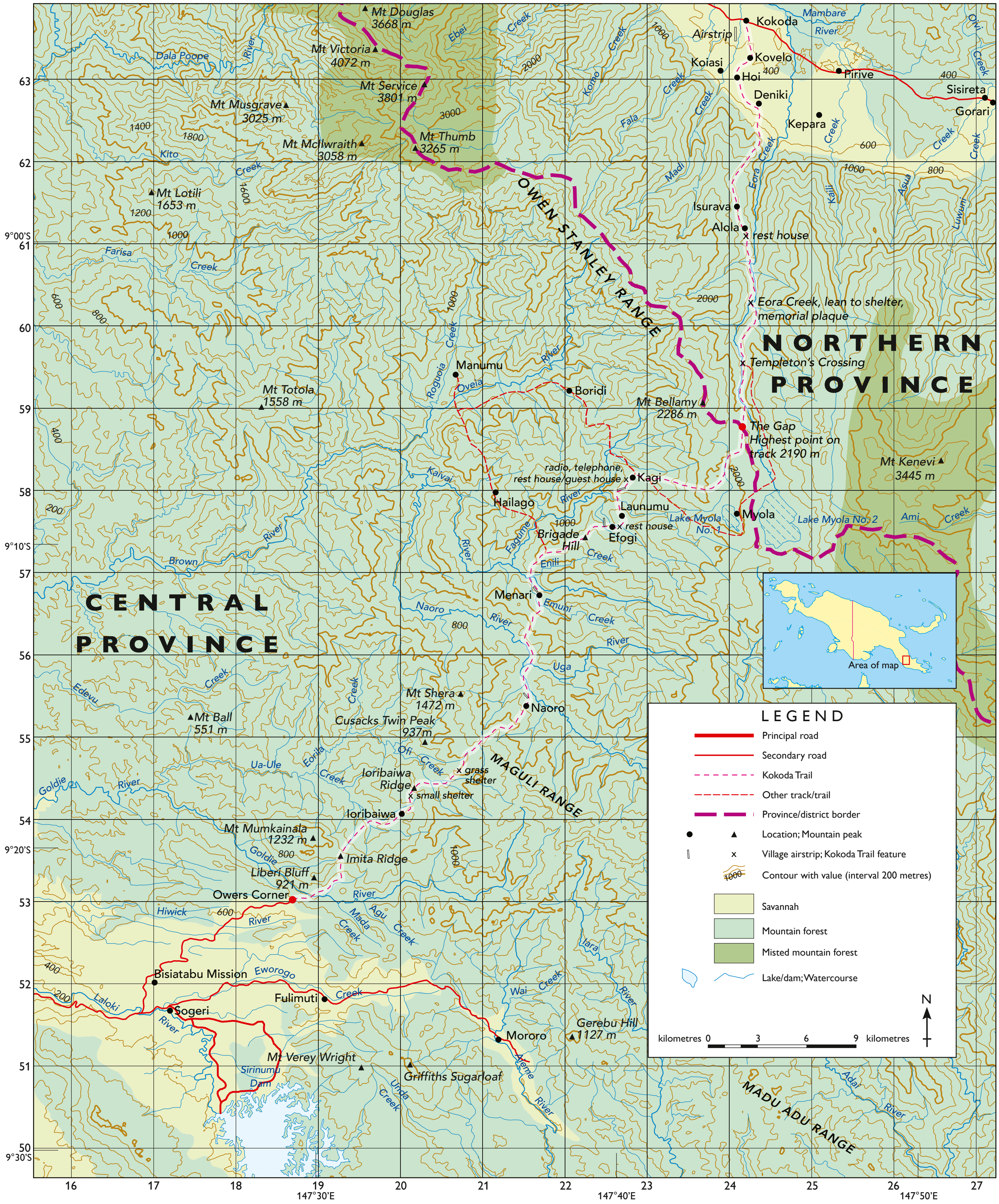
Extend your understanding

Conduct some further research on the Kokoda campaign and then complete the following tasks.

1. Which of the world's major biomes are shown on this map of the Kokoda Trail area?
2. What is the relationship between forest and terrain in this environment?
3. Explain why you think this relationship occurs.

Source 1 The rugged terrain of the Owen Stanley Range, Papua New Guinea

PAPUA NEW GUINEA: KOKODA TRAIL



Mt Douglas 3668 m
Mt Victoria 4072 m
Mt Service 3801 m
Mt Musgrave 3025 m
Mt McIlwraith 3058 m
Mt Thumb 3265 m
Mt Lotili 1653 m
Dala Poope
Kito
Farisa
Creek
River
Ebei
Kome
Fala
Madi
OWEN STANLEY RANGE
Kokoda
Airstrip
Mambare River
Koiasi
Kovelo
Hoi
Pirive
Sisireta
Gorari
Deniki
Kepara
Isurava
Alola
x rest house
Eora Creek
Kaili
Asua
Luwuni
Ovi
x Eora Creek, lean to shelter, memorial plaque
x Templeton's Crossing
NORTHERN PROVINCE
Manumu
Roguoia
Oveia
Boridi
Mt Bellamy 2286 m
The Gap Highest point on track 2190 m
Mt Kenevi 3445 m
Mt Totola 1558 m
radio, telephone, rest house/guest house x
Kagi
Kaivai
Hailago
Launumu
Lake Myola No. 1
Myola
Lake Myola No. 2
Ami Creek
Brigade Hill
x rest house
Efogi
Fagume
Enili
Brown
CENTRAL PROVINCE
Menari
Emuni Creek
Naoro River
Uga
Edevu
Mt Ball 551 m
Mt Shera 1472 m
Naoro
Cusacks Twin Peak 937m
Ofi Creek
x grass shelter
Ioribaiwa Ridge
x small shelter
MAGULI RANGE
Ioribaiwa
Goldie River
Ua-Ule
Eorila Creek
Mt Mumkainala 1232 m
Imita Ridge
Liberi Bluff 921 m
Owers Corner
Hiwick
Agu Creek
Mada Creek
Bisiatabu Mission
Eworogo
Fulimuti
Laloki River
Sogeri
Wai Creek
Idara River
Gerebu Hill 1127 m
Mororo
Sirinumu Dam
Mt Verey Wright
Griffiths Sugarloaf
Unda Creek
Aleme River
Adai River
MADU ADU RANGE
Area of map
LEGEND
Principal road
Secondary road
Kokoda Trail
Other track/trail
Province/district border
Location; Mountain peak
Village airstrip; Kokoda Trail feature
Contour with value (interval 200 metres)
Savannah
Mountain forest
Misted mountain forest
Lake/dam; Watercourse
N
kilometres 0 3 6 9 kilometres
9°00'S
9°10'S
9°20'S
9°30'S
147°30'E
147°40'E
147°50'E
63
62
61
60
59
58
57
56
55
54
53
52
51
50
16
17
18
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23
24
25
26
27

Source 2

Source: Oxford University Press

2.7 Where our food comes from

Food is grown all over the world across many different biomes. The kind of food that is grown in a region will depend on the kind of biomes it is home to.

For many people in the world, the question of where their food comes from is easy to answer. Throughout the developing world, particularly in developing areas of Africa and Asia, the majority of food comes from what people grow or gather. People in these places spend much of their time planting, growing and harvesting crops or looking after a few animals, like sheep, goats or cows. These activities provide them with virtually all of their food requirements, from milk and meat to grains such as rice, wheat or corn. The crops they grow and the animals they raise are influenced by a wide range of factors but mainly by the climate in which they live.

In developed countries like Australia, the question of where food comes from is much more difficult to answer.

In fact, very few people across the developed world would be able to tell you where their food comes from. This is because most people in these countries spend little or no time growing food. They rely on people in other places to grow food for them. Many Australians, for example, buy their food at a supermarket. But where does a supermarket get this food from? Labels on food give some indication, but these can be misleading at times.

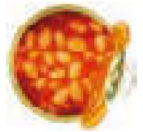
WORLD: ORIGIN OF SOME COMMON SUPERMARKET FOODS

1 Cornflakes, Wales

2 Apple sauce, Belgium

3 Chocolate hazelnut spread, Germany

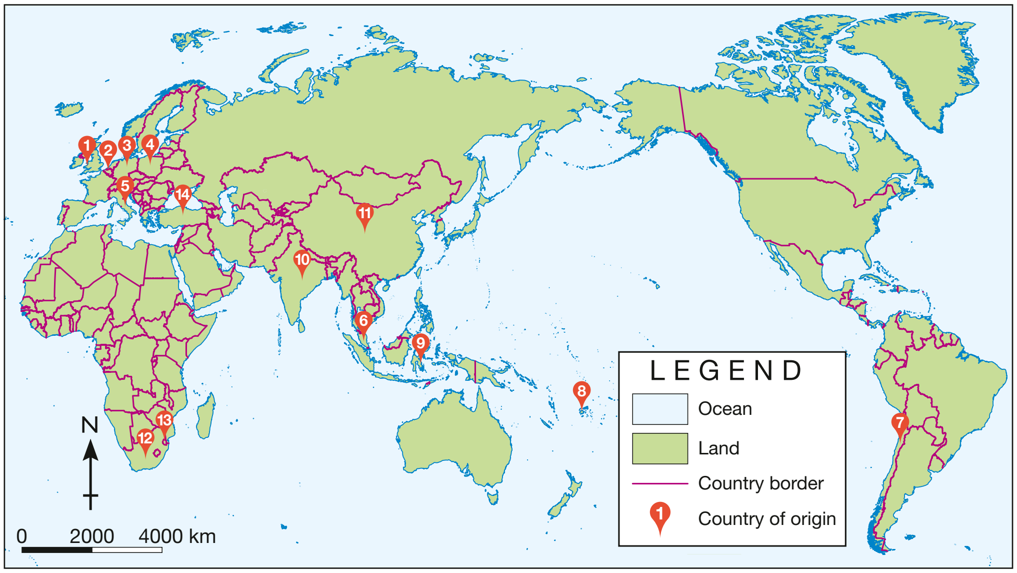
4 Strawberry jam, Poland



5 Baked beans, Italy

14 Dried sultanas, Turkey

13 Fruit salad, Swaziland

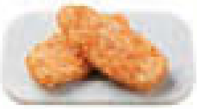


6 Instant noodles, Malaysia

7 Peach halves, Chile

Source 1

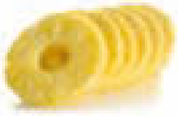
Source: Oxford University Press



12 Crumbed fish fillets, South Africa

11 Frozen cut beans, China

10 Pickled onions, India



9 Pineapple slices in natural juice, Indonesia

8 Choc mint slice biscuits, Fiji

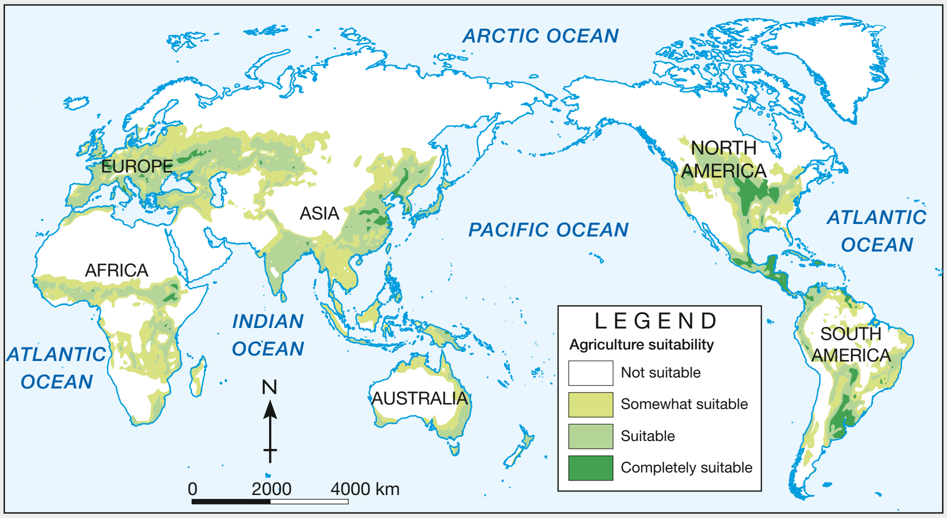
In a recent study, the origin of the home brand products sold in large supermarkets was studied in detail. The researchers found that about 50 per cent of Coles' products and 38 per cent of Woolworths' products were made or grown in Australia with the rest coming from overseas. Source 1 shows the origin of some common foods sold in Australian supermarkets.

key**concept:** Space

Agricultural suitability

Limitations of climate such as extremes in temperatures or low rainfall mean that many regions cannot support farming. Other areas may have low soil fertility, be covered in rainforest, be too mountainous or covered in ice caps. This means that the world's farms are concentrated in certain areas where the soil, climate and availability of water make farming possible. Source 2 ranks regions of the world in terms of their suitability for agriculture (i.e. completely suitable for agriculture to not suitable at all). Geographers use the key concept of **space** to better understand the patterns formed by agricultural use to make recommendations for the future.

WORLD: AGRICULTURAL SUITABILITY



Source 2

Source: Oxford University Press

For more information on the key concept of space, refer to page 7 of 'The geography toolkit'.

Check your learning 2.7

Remember and understand

1 Why is it difficult for people in developed countries to know where their food comes from?

2 Using the scale provided, work out which supermarket item shown in Source 1 has travelled the furthest distance to be sold in your town or city.

Apply and analyse

3 Examine Source 2 carefully.

   a Explain why each of the white areas in the following regions and countries may be unsuitable for agriculture: Australia, South America, North Africa, Central Asia.

   b Compare the map showing areas of the world suitable for agriculture to the world biomes map (Source 4 on page 43). Make some general statements about which biomes are most suitable for agriculture. Explain why you think this is the case.

Evaluate and create

4 What factors would be considered when making a map like Source 2 that show areas that are most or least suitable for farming?

5 Conduct research online to work out why Australian supermarkets source a large proportion of their products from overseas.

2.8 The importance of climate

More than any other factor, climate (especially rainfall and temperature) determines the type of farming that is practised in a given location. Some crops, such as rice and sugar cane, require warm temperatures and a reliable supply of water. Other types of farming, such as sheep and camel farming, can tolerate a wider range of temperatures and water supply (see Source 1). Farmers who share a similar climate, therefore, tend to practise the same type of farming. This leads to large regions of the Earth's surface being farmed in the same way.

In some places, farmers are able to use technology to overcome some of the limitations of climate. Many Australian farmers, for example, use water from rivers and dams to **irrigate** their crops rather than relying on natural rainfall. Others pump water from natural underground water storages called **aquifers**. Others use greenhouses so they can control the temperature and humidity, allowing crops such as flowers and vegetables to grow throughout the year.

Source 1 A nomadic farmer herds his camels in Ethiopia.

skill**drill**

Comparing patterns on maps

One of the most common ways that geographers analyse and explain the world around them is by looking for patterns in geographical data. For example, comparing patterns on maps they can examine the relationship between climate and farming. To compare patterns on two maps, follow these steps:

Step 1 Look carefully at the first map, particularly the title and legend, so that you understand exactly what it shows.

Step 2 Repeat this for the second map.

Step 3 Look at each map carefully and note regions where there seems to be a correlation (relationship). For example, in Sources 2 and 3 'little or limited agricultural use' on the agricultural regions map (Source 3) relates to 'hot desert' on the climate zones map (Source 2).

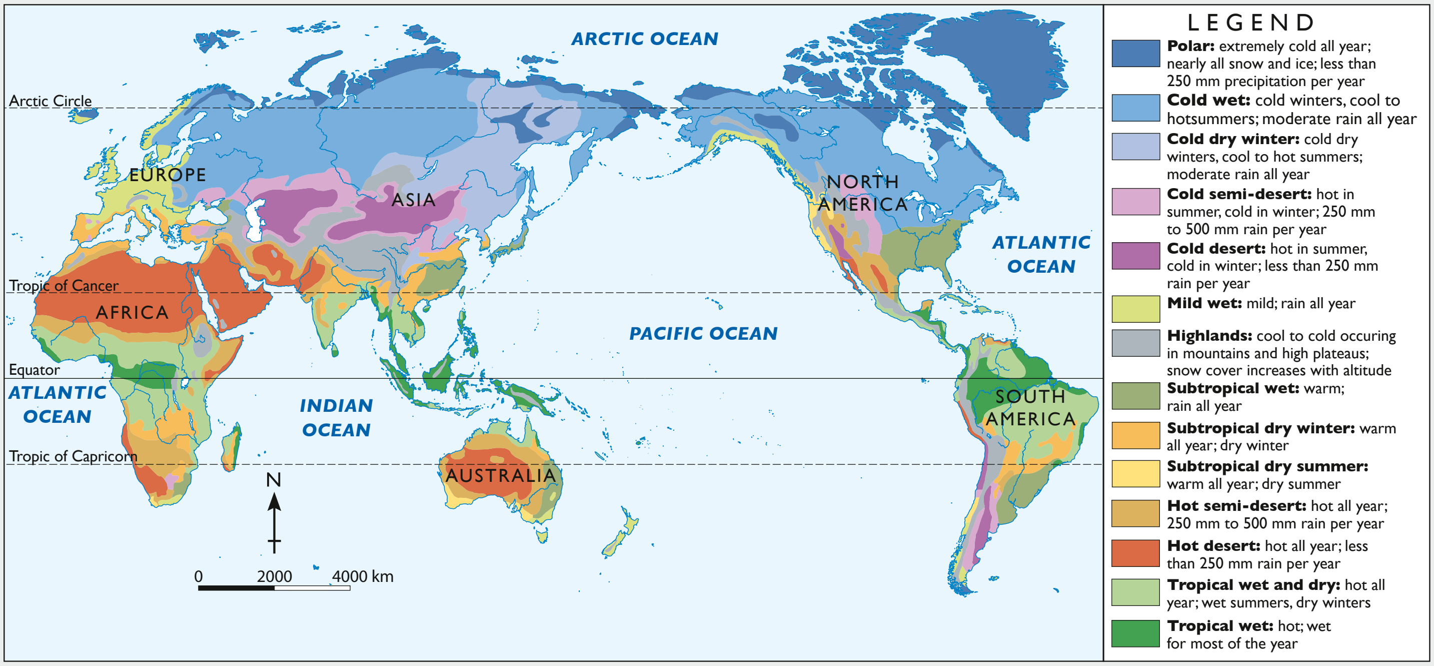
Step 4 Use an atlas map to find out the names of the places where this association occurs.

Step 5 Make a statement that sums up your associations. For example, rice farming is dominant in places with a subtropical climate such as north-east India and southern China where it is warm all year and has a dry winter.

Apply the skill

1 Use Sources 2 and 3 to account for the distribution of:
   - a dairy farming
   - b commercial – extensive livestock farming
   - c the pattern of agriculture in South America.

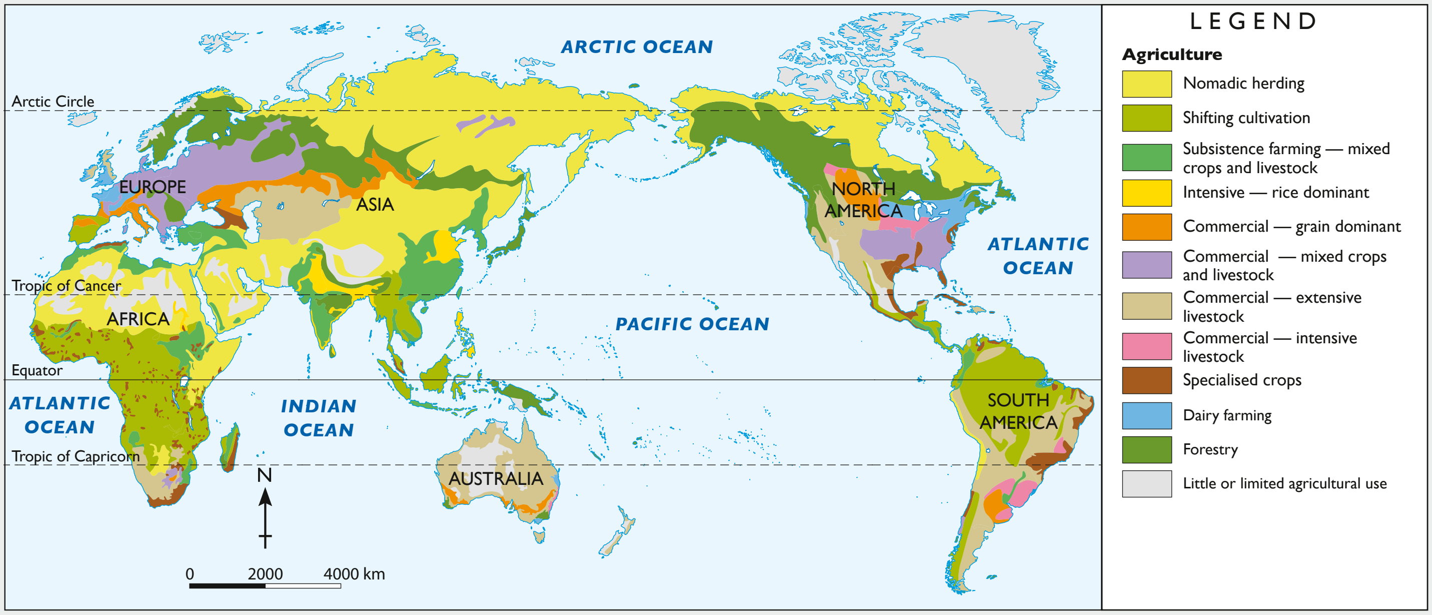
WORLD: CLIMATE ZONES


ARCTIC OCEAN
Arctic Circle
EUROPE
ASIA
NORTH AMERICA
ATLANTIC OCEAN
Tropic of Cancer
AFRICA
PACIFIC OCEAN
Equator
ATLANTIC OCEAN
INDIAN OCEAN
SOUTH AMERICA
Tropic of Capricorn
AUSTRALIA
N
0
2000
4000 km
LEGEND
Polar: extremely cold all year; nearly all snow and ice; less than 250 mm precipitation per year
Cold wet: cold winters, cool to hotsummers; moderate rain all year
Cold dry winter: cold dry winters, cool to hot summers; moderate rain all year
Cold semi-desert: hot in summer, cold in winter; 250 mm to 500 mm rain per year
Cold desert: hot in summer, cold in winter; less than 250 mm rain per year
Mild wet: mild; rain all year
Highlands: cool to cold occuring in mountains and high plateaus; snow cover increases with altitude
Subtropical wet: warm; rain all year
Subtropical dry winter: warm all year; dry winter
Subtropical dry summer: warm all year; dry summer
Hot semi-desert: hot all year; 250 mm to 500 mm rain per year
Hot desert: hot all year; less than 250 mm rain per year
Tropical wet and dry: hot all year; wet summers, dry winters
Tropical wet: hot; wet for most of the year

Source 2

Source: Oxford University Press

WORLD: AGRICULTURAL REGIONS


ARCTIC OCEAN
Arctic Circle
EUROPE
ASIA
NORTH AMERICA
ATLANTIC OCEAN
Tropic of Cancer
AFRICA
PACIFIC OCEAN
Equator
ATLANTIC OCEAN
INDIAN OCEAN
SOUTH AMERICA
Tropic of Capricorn
AUSTRALIA
N
0
2000
4000 km
LEGEND
Agriculture
Nomadic herding
Shifting cultivation
Subsistence farming — mixed crops and livestock
Intensive — rice dominant
Commercial — grain dominant
Commercial — mixed crops and livestock
Commercial — extensive livestock
Commercial — intensive livestock
Specialised crops
Dairy farming
Forestry
Little or limited agricultural use

Source 3

Source: Oxford University Press

Check your learning 2.8

Remember and understand

1 How does the climate of particular places influence the type of farming practised there?

2 How do some farmers overcome the limitations of climate?

Apply and analyse

3 How might a farmer overcome the limitations of frost?

4 Describe the distribution of nomadic herding in the world. Account for this distribution using Source 2.

2.9 Soil – more than just dirt

Many parts of the Earth's surface are covered in a thin, fragile layer of soil. Plants grow in this soil that feed every animal on Earth, including you. But what is soil and how are plants able to use it to grow?

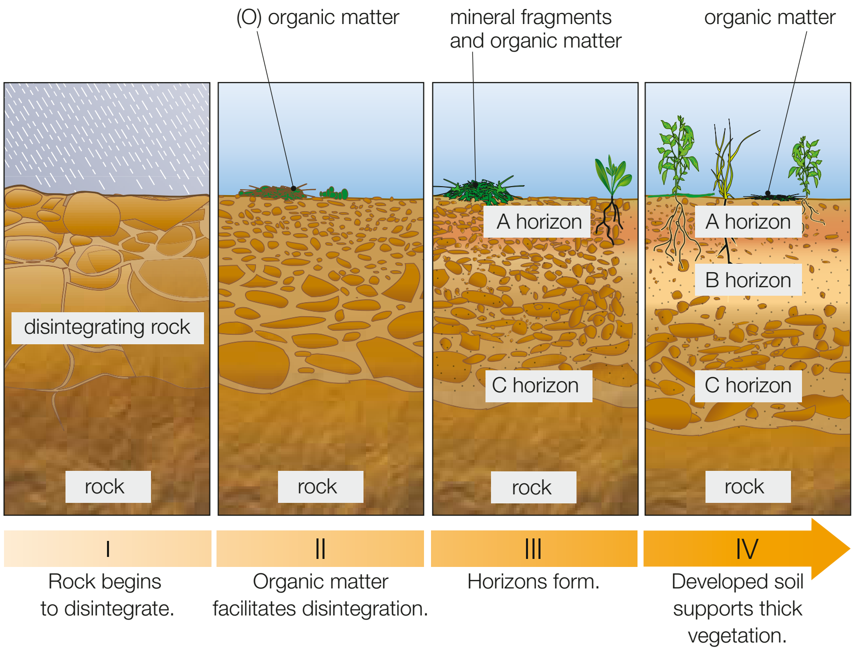
Soil is a mixture of air, water, broken-down rock, and organic material such as tiny animals and plants. Soil is a non-renewable resource – it takes thousands, even millions of years to form. The first step is the gradual breaking down or weathering of rock. Rock weathers because it is subjected to physical forces and processes such as freezing and thawing, the expansion of roots, or because the rocks rub against each other in a stream or river. Movement of ice in a glacier, the flow of water in a river or ocean, or the force of wind can all cause rocks to weather.

Rocks are also weathered by chemical changes that occur. Water can dissolve minerals found in rocks, reacting and forming new minerals which may then break down the rock itself. Oxygen also combines with some minerals to wear away rocks and the slightly acidic nature of rain can also help to dissolve rocks (see Source 1).

As rocks break down into finer and finer particles, the minerals within them become available to plants. Seeds carried onto weathered rock by wind, water, animals and birds are able to germinate and send roots down into the new soil. As plants die and leaves fall onto the soil, they decompose and add to the fertility of the soil. This allows other plants to flourish in the soil.

Over time, soils form layers known as **horizons**. These can be seen where a road has been cut through a hillside. By examining the horizons, soil scientists and farmers are able to determine how best to farm different areas. The horizons are labelled using letters so they can be easily identified and compared. From top to bottom, the horizons are O (organic matter), A, B, C and Rock (see Source 2). Some soils may have all the horizons, while others may have only one or two horizons. By identifying which of the horizons are missing in the soil, the farmer will know how and when to treat it. For example, if the soil is lacking organic matter, **mulch** can be added to increase mineral content and prevent water loss through evaporation.

Source 1 Like all rocks, Uluru is under attack from physical and chemical weathering. The desert soil in the foreground would be partly made up from weathered rock particles. Only shrubs and grasses are able to grow in this soil.


(O) organic matter
mineral fragments and organic matter
organic matter
disintegrating rock
rock
rock
A horizon
C horizon
rock
A horizon
B horizon
C horizon
rock
I
Rock begins to disintegrate.
II
Organic matter facilitates disintegration.
III
Horizons form.
IV
Developed soil supports thick vegetation.

Source 2 The development of soil horizons over time

The challenge of Australia's soils

Australian farmers have to overcome the many challenges of a variable climate, with its extremes of droughts and floods. Perhaps the greatest challenge faced by Australian farmers is the condition of the soil. As one of the world's oldest continents, Australia also has some of the oldest soils on Earth. The constant **weathering** over millions of years has washed away many of the important nutrients and minerals and our soils are among the world's poorest.

As well as being much less fertile than other soils around the world, many of our soils are much saltier than in other places. This is because much of the continent was once covered by ocean, and though the water has receded, the salt remains. Much of our soil is also composed of clay either at the surface or just below the surface. This restricts water drainage into the soil and makes it difficult for the roots of plants to penetrate.

Australian soils therefore are generally low in nutrients, thin and easily eroded. Australian farmers have developed many ways of dealing with these limitations. The most obvious of these is adding nutrients and chemicals to the soil that are missing (see Source 3). Farmers regularly test their soil and will add fertiliser containing those chemicals that their plants need. As crops grow they draw these nutrients from the soil and so farmers must continue to replace them, often applying fertiliser annually.

Source 3 Fertiliser containing nutrients such as nitrogen and phosphorus is usually spread using a tractor or truck.

Check your learning 2.9

Remember and understand

1 Why are Australia's soils generally low in nutrients?
2 Why is soil an important natural resource?
3 Why do many farmers need to replenish the nutrients in the soil with fertiliser annually?

Apply and analyse

4 Look at Source 1. What physical forces do you think are weathering Uluru?
5 Is soil a renewable or non-renewable resource? Give some reasons for your answer.

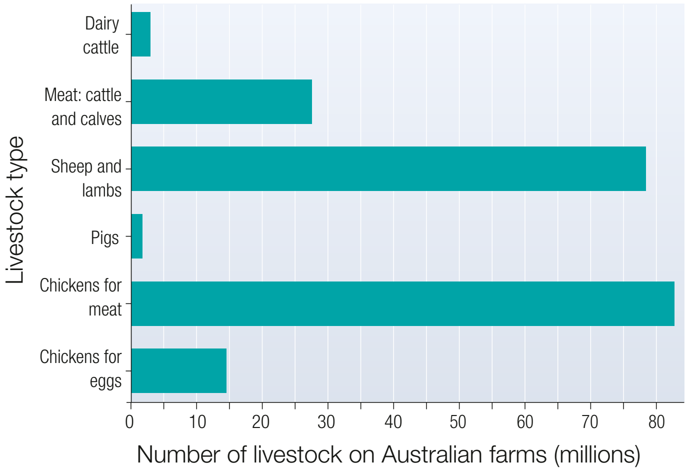
Evaluate and create

6 Construct a flow diagram with boxes and arrows describing how soil is formed.
7 Explore the soil profile in your local area. Look for a place where a stream has cut down into the soil or a cutting has been made for a road or railway. Sketch the soil profile and see how many of the horizons you can identify. Compare your profile to stage IV in Source 2. What are the similarities and differences?

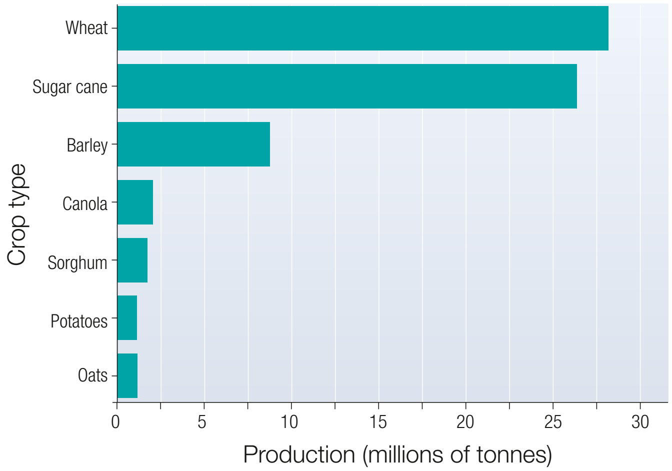
2.10 Food production in Australia

There are more than 135 000 farms in Australia. They can be classified in many different ways, for example, those that grow crops and those that raise livestock. Another way a farm can be classified is by how large it is in relation to the amount of food or fibre it produces.

Farms that require large areas of land – to provide pasture for sheep or cattle, for example – fall under the classification of **extensive farming**. On the other hand, farms such as poultry farms or those that grow vegetables, can produce large volumes of food or fibre in a small area, and are classified as **intensive farming**.

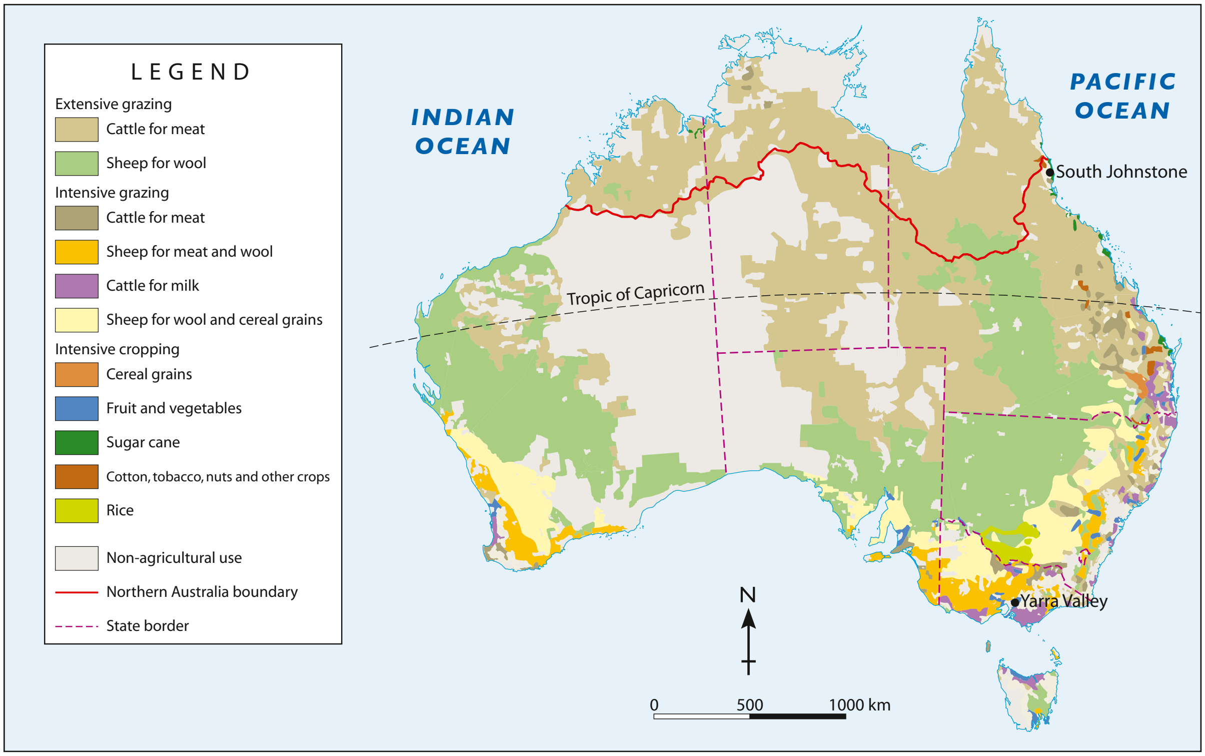


Source 1 This graph shows the number of livestock on Australian farms by type.



Source 2 This graph shows the crops grown on Australian farms by type each year.

AUSTRALIA: LAND USAGE


LEGEND
Extensive grazing
Cattle for meat
Sheep for wool
Intensive grazing
Cattle for meat
Sheep for meat and wool
Cattle for milk
Sheep for wool and cereal grains
Intensive cropping
Cereal grains
Fruit and vegetables
Sugar cane
Cotton, tobacco, nuts and other crops
Rice
Non-agricultural use
Northern Australia boundary
State border
INDIAN OCEAN
PACIFIC OCEAN
South Johnstone
Tropic of Capricorn
Yarra Valley
N
0
500
1000 km

Source 3

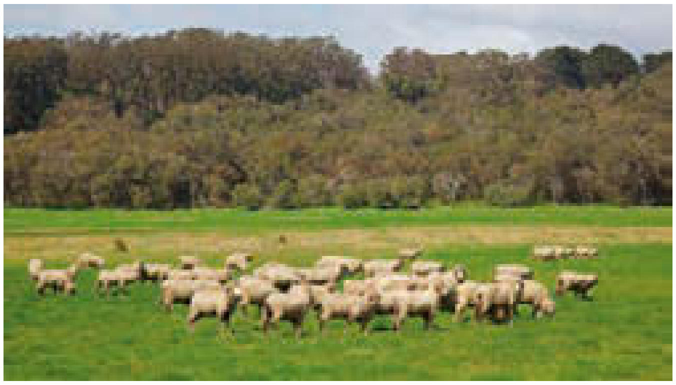
Source: Oxford University Press

Should we grow more food in northern Australia?

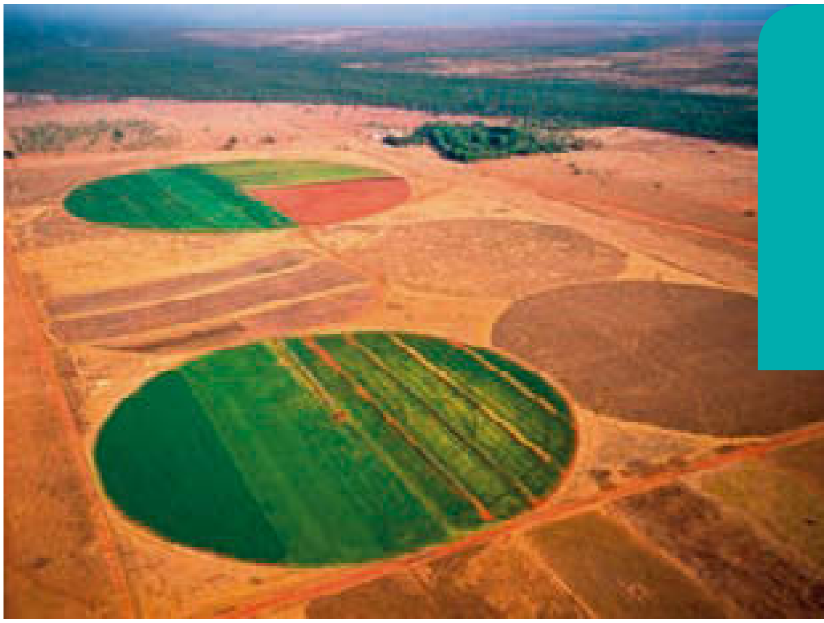
Farming in northern Australia, like farming everywhere, is determined by environmental factors, particularly temperature, soil fertility and water. The soils in the north are among the world's oldest and have been subject to monsoonal downpours for millions of years. This has **leached** many important minerals out of the soil making it relatively infertile. Much of the soils of the north are arid or semi-arid and the rain that does fall tends to be seasonal rather than all year round. These factors make intensive farming difficult. Cattle farming, therefore, dominates in northern Australia, covering 90 per cent of the land area and accounting for 30 per cent of the nation's total cattle.

Several government task forces have identified the water that lies in rock layers (known as aquifers) beneath northern Australia as the key to expanding intensive agriculture. They have suggested that small-scale intensive farming using groundwater has the potential to triple the amount of cropland in the north from the current 20000 hectares. An example of this type of farming (known as mosaic agriculture) is shown in Source 6.

Source 4 Cropping of sugar cane is carried out near South Johnstone in north Queensland.



Source 5 Sheep grazing in Albany, Western Australia



Source 6 These circular fields in northern Australia are an example of the result of pivot-circle irrigation using groundwater from aquifers.

Check your learning 2.10

Remember and understand

1 Describe the main differences between intensive and extensive farming.

2 What are some of the limiting factors for further intensive farming in northern Australia?

Apply and analyse

3 Examine Sources 5 and 6. Classify each of these farming types as either intensive or extensive farming.

4 Select one of the farming types shown in Source 3.

  a Describe its distribution in Australia.

  b Brainstorm the environmental factors that help to explain this distribution.

5 Using Source 3, explain why you think fruit and vegetables are often grown near large cities.

Evaluate and create

6 Describe the current distribution of farming types in northern Australia.

7 Using the information provided, together with additional research, classify each of the livestock types in Source 1 and crop types in Source 2 according to whether they are examples of extensive or intensive farming.

2.11 Influencing crop yield

Every year, famers in different countries around the world make decisions about what crops they will grow and what animals they will raise on their properties. Before they make any decisions, they must consider a number of competing factors that will affect their **crop yield**. Crop yield refers to the amount of crop (in kilograms) that is grown per hectare, and is used by farmers to measure how much they have grown. For the many farmers in Western Australia, their decisions will impact their yield of crops such as wheat. They need to consider their own level of experience as a farmer, the types of machinery and help they have available, the cost of grain, the amount of rain forecast, the quality of the soil, the estimated price they will be paid for the crops they produce and how they will transport them to market. Broadly speaking, all of these competing factors can be divided into two main categories:

- environmental factors
- technological and economic factors.

Examples from each of these categories are provided in Sources 1 and 2.

ENVIRONMENTAL FACTORS

Sunshine: Places nearer to the Equator receive more direct sunlight than places closer to the poles. This will influence the length of the growing season as all plants need sunlight.

Temperature: Different plants have different tolerances to temperature. Some grow best in warm temperatures, others when it is cold. Frosts and very warm temperatures can damage some plants so farmers carefully monitor air and soil temperatures so they know when to plant or harvest their crops.

Soil fertility: Plants need certain minerals and trace elements to grow and they take these from the soil. Some soils have more of these and are therefore more fertile. Farmers may need to add minerals in the form of fertiliser to infertile soils.

Soil structure and texture: Soils are a combination of clay, sand and **silt** in varying proportions. Soils with high clay content can make it difficult for plant roots to penetrate and may become waterlogged whereas sandy soils may not hold water. The best soils are called loams and combine all three parts in equal proportions.

Wind: Strong winds can dry out the soil, and damage or even destroy crops.

Humidity or rainfall: Some plants like warm and moist conditions, some need dry conditions to grow well. All plants need water but some need large quantities spread throughout the year while others thrive in drier conditions. Farmers carefully assess factors such as the total rainfall in a year and the times of the year when it falls in deciding on the best crops to grow and when to plant them.

Landforms: Flat areas are generally easier to farm than hillsides as machinery such as tractors and harvesters can work more easily on flat land. Flat areas, however, may be prone to flooding. The direction that a slope faces (the aspect) may be important as it may determine the amount of sunlight plants receive.

Accessibility: Easy access to farmland is important for transporting equipment, harvested crop and labour. Farms might need to develop roads so they can easily inspect and manage all of their land. Farming can also be made difficult if a farm is located far from sources of infrastructure, such a water supply or other services.

Water: A nearby river or aquifer can provide water to irrigate crops or to give animals such as cows and sheep water to drink.

Source 1 A range of environmental factors need to be taken into account when making decisions on a farm, such as this wheat farm near Stirling Ranges National Park

TECHNOLOGICAL AND ECONOMIC FACTORS

Markets: Farmers who grow food for profit have to be able to sell it. The proximity of a large city will provide a demand for many products and many farmers also export their produce to other countries. The prices for farm produce change over time and this may influence which crops a farmer grows in a particular year.

Technology: New technologies such as irrigation systems and breeds of crops may allow some farming types to spread into new areas. On the other hand, many farmers in developing countries may have access to only simple technologies such as a horse-drawn plough or hand sowing of seeds.

Expertise: Farmers often specialise in growing a certain crop or raising a certain breed of animal. This may have been the case for many previous generations. As a result, they may have built up a great deal of expertise in this type of farming.

Financial resources: Many farmers in the developing world have few financial resources to buy machinery and hire labour and so they rely on their own physical labour and are able to grow only enough food to feed their own families.

Source 2 A range of technological and economic factors can influence crop yield on a farm.

Check your learning 2.11

Remember and understand

1 How does the climate in a particular place influence farming practices there?

2 Name three soil properties that might influence a high crop yield.

Apply and analyse

3 Most farmers continue to practise the same type of farming year after year. Why do you think this is the case?

4 Select one of the environmental factors discussed in Source 1 and explain how an individual farmer may improve or adapt to this factor on his or her farm.

Evaluate and create

5 Consider all of the environmental, technical and economic factors discussed in Sources 1 and 2. Rank the factors a farmer needs to take into consideration from most to least important. Give a reason for each of your three top-ranked factors.

2.12 High-tech farming

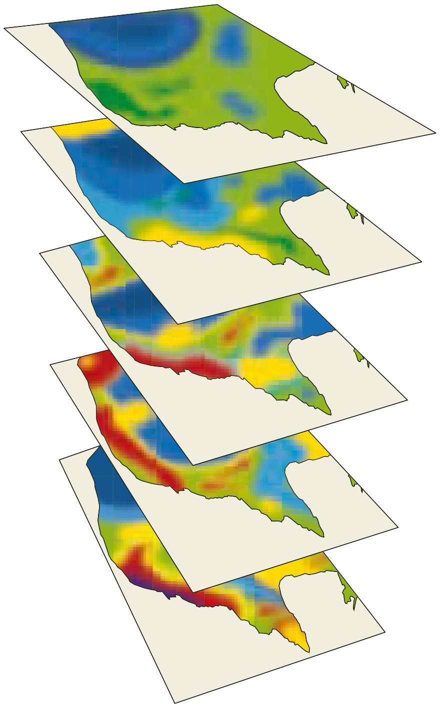
Modern technologies have changed farming methods and made many farms in Australia and around the world more efficient and more productive. The use of technologies such as computers, satellites, remote sensors, geographic information systems (GIS) and **Global Positioning Systems (GPS)** has allowed some farms to go 'high-tech'. Some Australian farmers are using pilotless planes (known as drones) to keep watch on their soils, plants and water, while others are tracking their sheep and cattle with sensors implanted in the animals' ears or in electronic collars. Technology continues to advance farming operations, increasing crop yield and improving the breeding conditions of cattle.

Precision farming

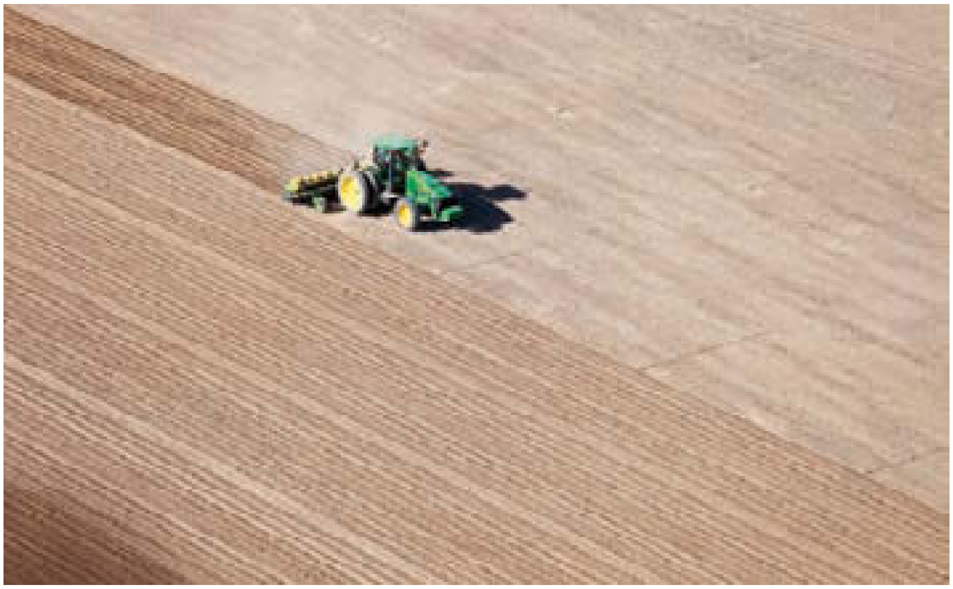
On every farm there are wide variations in natural features such as slope, soil fertility, soil moisture and drainage. There may also be different soil conditions in different spots on the farm – past farming practices may have taken minerals from some parts of the farm but not others. Each farm and each field is therefore a patchwork of different soil and water features. Often, however, all parts of the field or farm are treated in the same way, despite being a 'patchwork' of different conditions and levels. This means that some parts of each farm are less productive than other parts.

A new farming system known as **precision farming** is beginning to change this old method to bring about better economic and environmental outcomes. Sensors mounted on satellites, planes and helicopters collect large amounts of data on many aspects of the environment including rates of plant growth, minerals in the soil and soil moisture. Using GPS, this data is then converted to detailed maps of each farm showing, for example, areas of high crop yield and areas with a lower yield (see Sources 1 and 2).

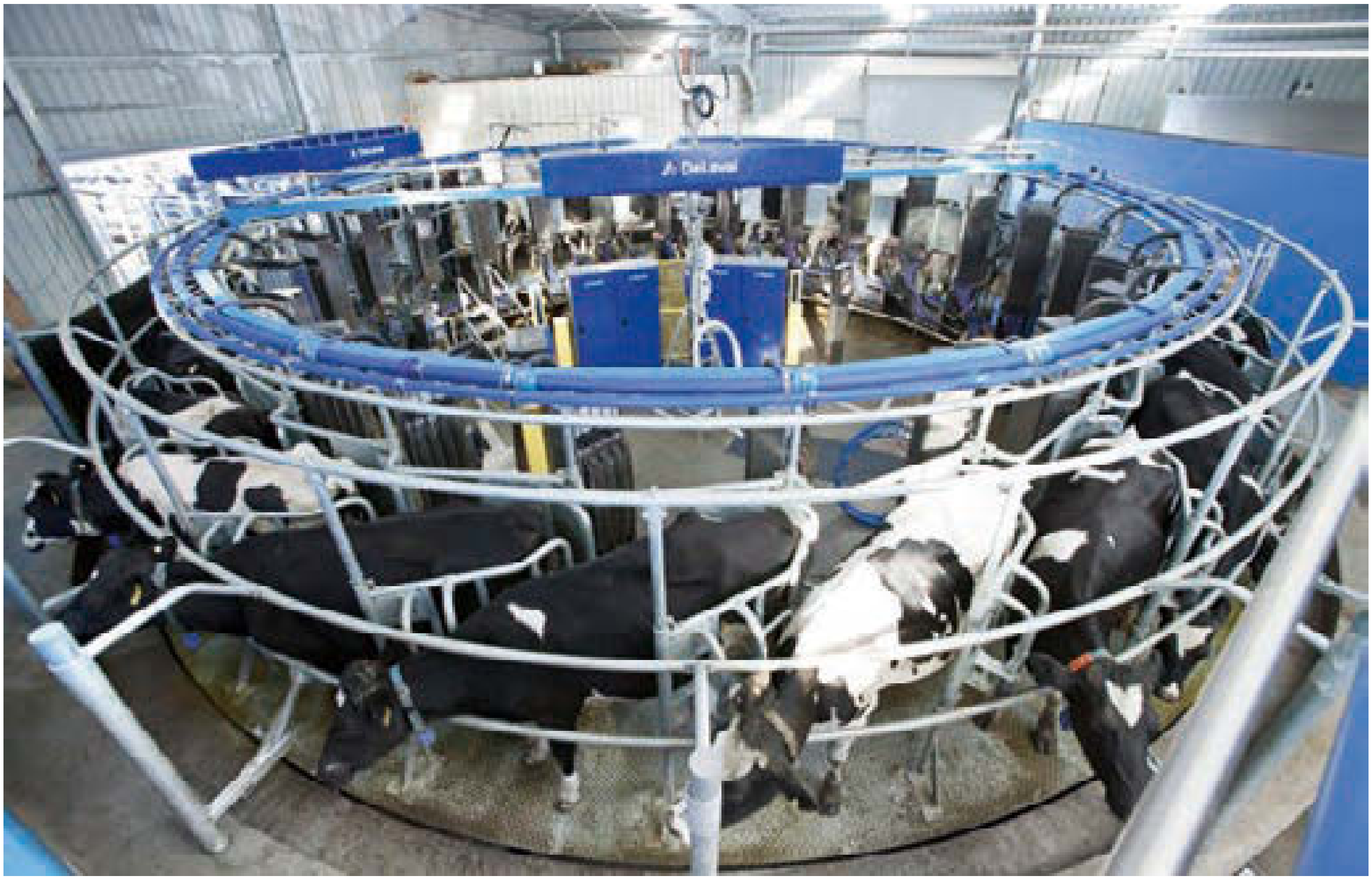
This information is then available to the farmer to make decisions about better and more precise irrigation and fertilisers and the choice of crops and the times to plant and harvest them. Using precision farming tools such as layered maps and GPS, farmers can determine precisely the best places to plant. They can identify where the soil is richer in minerals, so they can grow better crops. Rows of soil used in previous years where minerals have been depleted can be avoided.



Source 1 Layered maps using GPS data can clearly show farmers different elements they need to consider.



Source 2 Using precision farming tools, such as layered maps and GPS, farmers can determine precisely the best places to plant their rows of crops.



Source 3 Milking time at Gala dairy farm near Deloraine, Tasmania and not a farmer in sight!

Case study: robots on the farm

Gala dairy farm near Deloraine in Tasmania may look like most other dairy farms in Australia – cows contentedly munch on green grass for most of the day and then head to the shed to be milked. But this farm is like no other dairy farm in the world because these cows milk themselves, with help from a robot or two. Once the cow arrives in the dairy, overhead cameras and a Wi-Fi linked sensor guide robotic arms to clean the cow's teats and attach suction cups. An electronic collar identifies each cow and allows their milk production to be monitored and recorded.

The cows stand on a rotating circular platform while being milked and are rewarded for coming to the dairy with a small feed of grain and access to a paddock of fresh grass. Because cows can choose when and how often they wish to be milked, milk production on the farm is up 20 per cent from the traditional method of milking cows twice a day.

Check your learning 2.12

Remember and understand

1 What is precision farming?

2 Why are the cows in Source 3 wearing electronic collars?

Apply and analyse

3 Is Gala dairy farm an example of precision farming? Give some reasons for your answer.

4 Why is GPS an essential part of precision farming?

5 What are some of the advantages of robotic milking for the farmer and what are some of the disadvantages?

6 Explain why precision farming can help to make farming more sustainable.

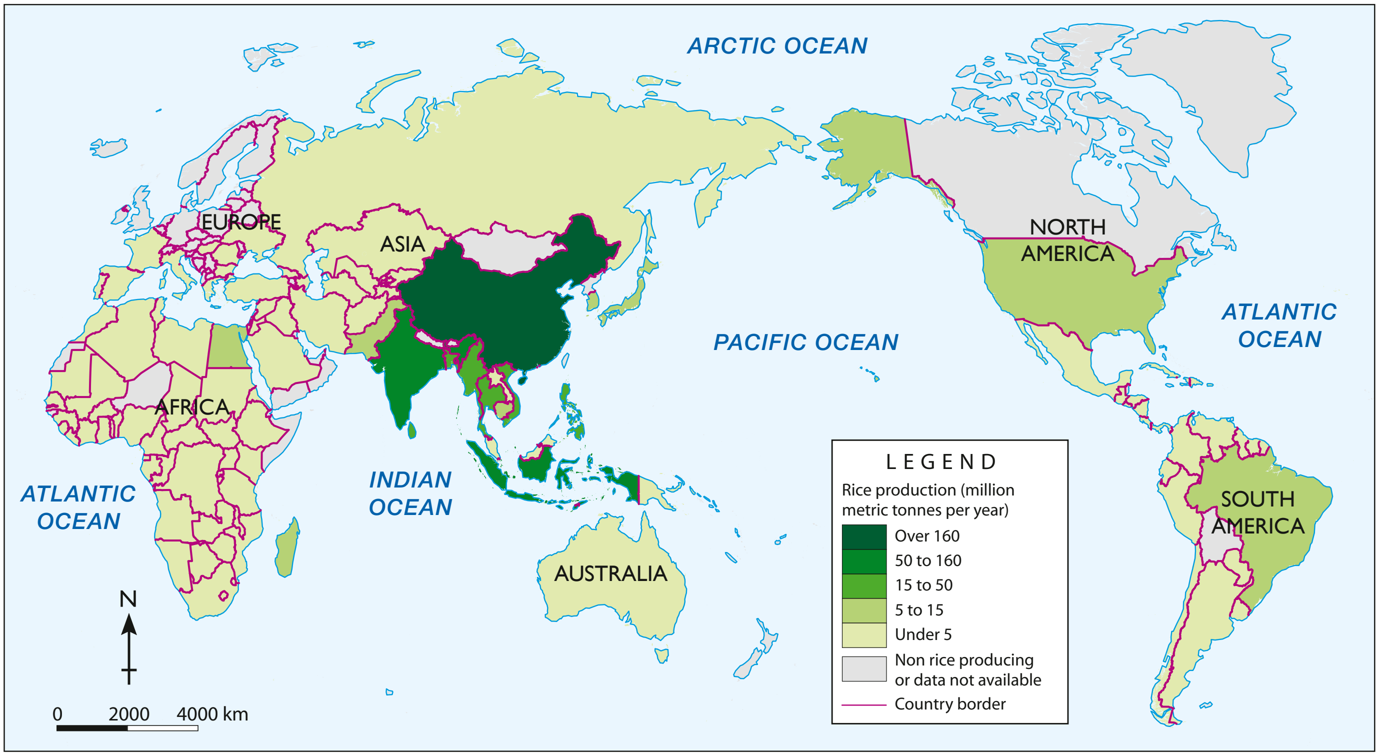
Evaluate and create

7 Using ideas from Source 3 and online research, invent a machine that shears sheep. Remember that each sheep is slightly different from every other sheep so your machine needs to take this into account. Draw a labelled sketch of your shearing machine.

2.13 Rice – the grain of life

Rice is one of the world's most important crops. It supplies about one-fifth of all **calories** consumed by humans and is the main food eaten in more than 30 countries. About 700 million tonnes of rice are produced around the world every year. Around 90 per cent of this is grown in Asia. China's production of rice alone accounts for almost one-third of the world's total annual rice production.

WORLD: RICE PRODUCTION


ARCTIC OCEAN
EUROPE
ASIA
NORTH AMERICA
PACIFIC OCEAN
ATLANTIC OCEAN
AFRICA
INDIAN OCEAN
ATLANTIC OCEAN
AUSTRALIA
SOUTH AMERICA
N
0 2000 4000 km
LEGEND
Rice production (million metric tonnes per year)
Over 160
50 to 160
15 to 50
5 to 15
Under 5
Non rice producing or data not available
Country border

Source 1

Source: Oxford University Press

skill**drill**

Describing patterns on choropleth maps

The map in Source 1 is a **choropleth map**. Geographers use choropleth maps to give a quick impression of a spatial pattern by using dark and light shades of the same or similar colours. Darker shades usually show 'the most' and lighter shades show 'the least'. You can describe the pattern on choropleth maps by following the PQE (Pattern–Quantify–Exceptions) method. For more information on the PQE method refer to page 19 of 'The geography toolkit'.

Step 1 Read the title and examine the legend carefully so that you understand what the map is showing.

Step 2 Describe the general pattern that is apparent on your map. Use the names of continents and large regions.

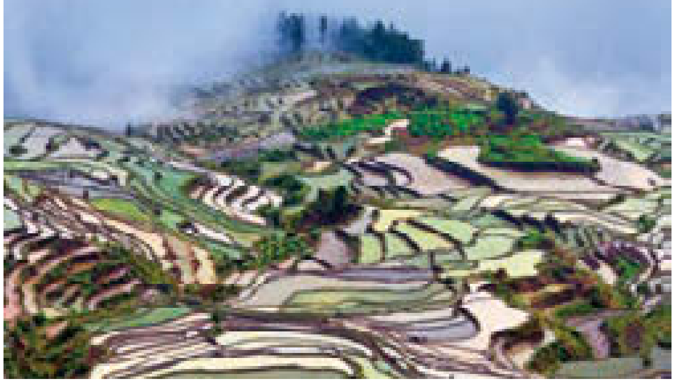
Step 3 Quantify your description of the pattern by giving the names of specific countries and the mapped data related to these countries.

Step 4 Point out any exceptions to the general pattern that you have described. For example, this may be a country that produces a lot of rice despite being far away from any other major rice-producing country.

Apply the skill

1 Describe the pattern of global rice production using Source 1 and the PQE method.

Source 2 In upland areas many farmers first clear the land, often by slashing and burning.



Source 3 Rice paddies in Yunnan province, China

Rice-growing around the world

Rice growing occurs in many different environments – in areas that flood every year and also where rain is far from reliable. These variations make it possible to identify four main systems of rice growing.

1. Irrigated rice: Irrigated ecosystems account for about three-quarters of global rice production. Irrigated rice is grown in fields, called rice paddies, where series of embankments and terraces are built to control the flow of water across the fields. This system is most common in East Asia, particularly Indonesia, Vietnam, the Philippines and Thailand.
2. **Rainfed rice**: Many farmers in low-lying areas in countries such as Bangladesh, Myanmar (Burma) and Thailand rely on natural rainfall rather than irrigation to water their rice crops. Annual monsoonal rains may cover their fields with 50 centimetres of water into which they plant their crops. This is known as the rainfed lowland system of rice growing. These farmers face many challenges to produce a reliable crop, notably poor soil quality and unreliable rain.
3. Upland rice: In West Africa, Central and South America, and highland regions of Asia, **upland rice growing** dominates. Usually grown beside other crops, productivity is generally low as soils are often poor and little or no fertiliser is used. Rainfall may be unreliable and erosion may be a problem in some areas, as the rice fields do not usually have embankments to control the flow of water.
4. Flood-prone rice: In some flood-prone zones in Cambodia, Vietnam and Myanmar (Burma), a rice crop may be grown in areas characterised by periods of flood and drought. The rice grown is tolerant to being covered by water but yields tend to be low and unreliable.

Source 4 A comparison of the productivity of four different rice systems

System	Yield (tonnes/ hectare)	Crops (per year)	Productivity (tonnes/ hectare/year)
Irrigated rice – rice grown using irrigation systems for water	5.0	2.5	12.5
Rainfed rice – rice-growing system that relies on rainfall for water	2.5	1	2.5
Upland rice – rice grown in rainfed lowland fields that is prepared and seeded when dry	1.0	1	0.12
Flood-prone rice – rice grown in areas prone to extreme flooding and drought, typically low yield	1.0	1	1.0

Check your learning 2.13

Remember and understand

1. What type of rice-growing system is being used in Source 3?
2. How would the farmers in these fields control the flow of water to their crops?

Apply and analyse

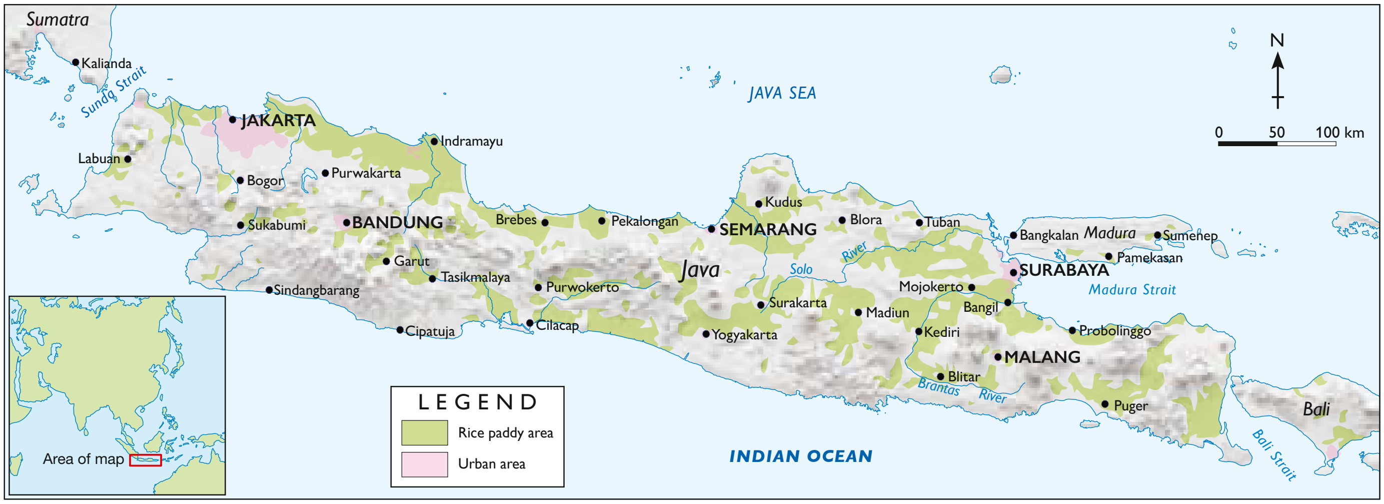
3. Which is the most productive system of rice growing? Why do you think this is the case?
4. Why do you think upland rice growing is not as productive as the other systems?

Evaluate and create

5. In small groups, discuss the environmental impacts of growing rice. Present a report of your conclusions, using headings such as ‘Impacts on water, soil, landforms and natural vegetation’. Which of the four rice-growing systems do you believe impacts the natural environment the most?

2.14 Rice growing in Java

JAVA: RICE GROWING AREAS


Sumatra
Kalianda
Sunda Strait
JAKARTA
Labuan
Bogor
Purwakarta
Indramayu
JAVA SEA
N
0
50
100 km
Sukabumi
BANDUNG
Garut
Tasikmalaya
Sindangbarang
Cipatuja
Brebes
Pekalongan
Purwokerto
Cilacap
Java
Kudus
SEMARANG
Blora
Tuban
Solo River
Surakarta
Yogyakarta
Madiun
Mojokerto
Bangil
Kediri
Blitar
Brantas River
MALANG
Bangkalan
Madura
Sumenep
Pamekasan
SURABAYA
Madura Strait
Probolinggo
Puger
Bali
Bali Strait
INDIAN OCEAN
Area of map
LEGEND
Rice paddy area
Urban area

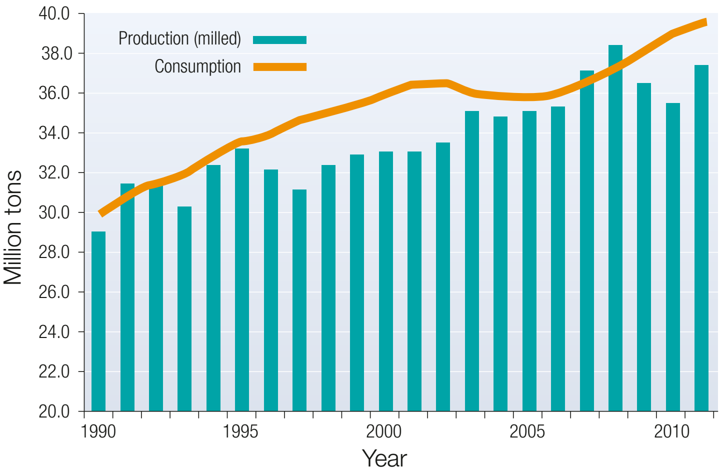
Source 1 Source: Oxford University Press

The Indonesian island of Java is one of the world's most populated islands and one of the most densely populated places on Earth. It is home to almost 150 million people. The Javanese people have developed a way of life that uses the island's natural resources to provide them with ample food. Java is a volcanic island with abundant rainfall, and eruptions over millions of years have produced fertile soil for the growing of crops such as rice.

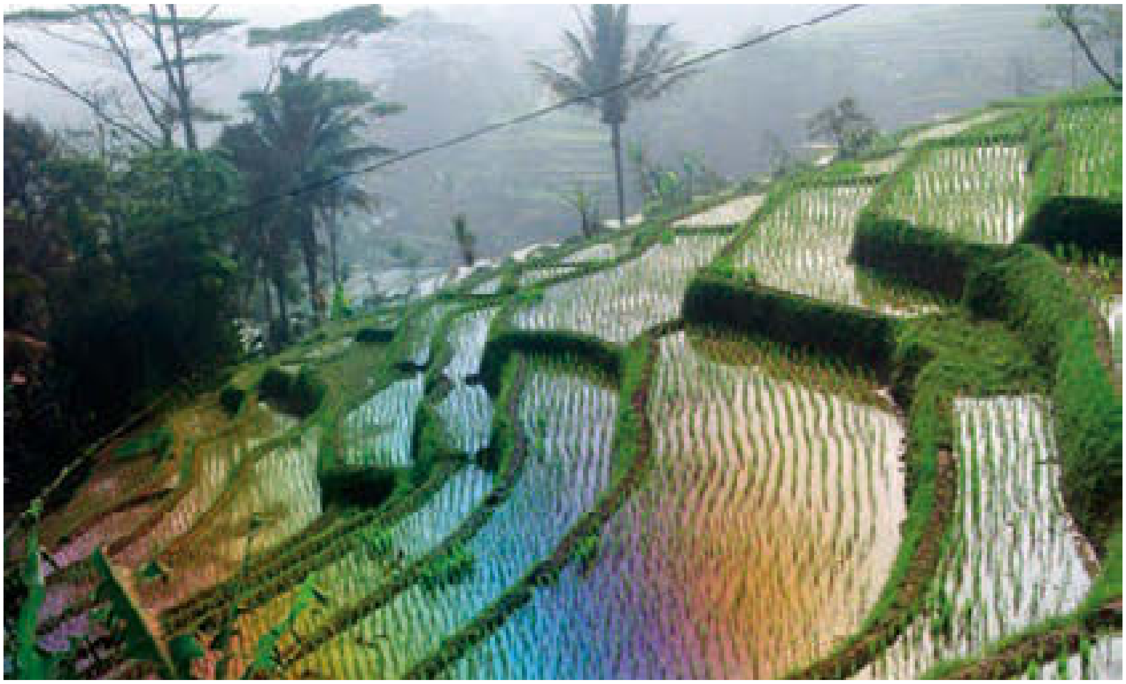
In fact, Java is home to some of the world's most productive rice fields. Over three-quarters of Javanese farmers grow rice, mostly in small family-owned fields of less than 1 hectare (0.01 km^2). Farmers tend to live in villages and towns and walk every morning to their rice fields. Everyday tasks are determined by the season. Most rice farmers in Java are able to grow two crops throughout the year, but on more fertile ground some farmers are able to grow three. Fertiliser is usually added to the soil to complement its natural fertility.

In recent years, Java's population has grown faster than increases in rice production and this has meant that the island has had to import rice from other Asian countries. As Java's population continues to grow there is greater pressure on the rice farmers to become more productive. There is also an increased competition for land. Agricultural scientists are working hard to find solutions to Java's stalled increases in crop yields but they face serious issues:

- Farmers tend to be poorly educated and have little money to invest in new technologies.
- Farm sizes are declining because land is divided between family members after the death of a farmer.
- More than 100 000 hectares (1000 km^2) of rice paddies have been lost, they have been used to grow other crops such as palm oil, or to build houses and factories.
- Little government money is spent on improving and repairing irrigation systems.
- There are few qualified experts to advise farmers how to increase crop yields through the introduction of new varieties of rice and pest control.



Source 2 Rice production and consumption in Indonesia between 1990 and 2011



Source 3 Terraced rice fields in Java

skill**drill**

Constructing an annotated field sketch

Geographers use field sketches as a way of capturing impressions immediately and directly. While on a field trip to examine an environment in detail you may be asked to complete a field sketch. It is often a good idea to practise field sketching from a photograph before the field trip. The method for drawing a field sketch is the same as sketching from a photograph. Follow these steps:

Step 1 Draw a border of the correct shape.

Step 2 Using a pencil, lightly sketch the main landscape lines. If there is a horizon in the scene put this about one-third from the top of the frame.

Step 3 Add detail to your sketch. Annotate or label those parts of the scene that you consider most important.

Step 4 Add some shading and colour. Don't try to copy every subtle colour of nature, just give a hint of the right colour.

Step 5 Label your sketch with the location and date.

Apply the skill

1 Follow the steps provided to complete a field sketch of Source 3. On your sketch, label key natural and managed features of the environment.

Check your learning 2.14

Remember and understand

1 How is the island of Java able to support so many people?

2 Identify two environmental factors that might influence Java's high crop yields.

Apply and analyse

3 Examine Source 2.
   - a Describe the pattern in Indonesia's rice production between 1990 and 2011.
   - b Describe the pattern in consumption over the same period.
   - c Explain why Indonesia has become a rice importer in recent years.

4 What relationships are there between the natural environment and the growing of rice in Java?

5 Many farmers in Indonesia use water buffalo rather than a tractor to plough their fields. What would be the advantages of using buffalo? What would be the disadvantages? How might the methods of farming change if a farmer were given a tractor?

Evaluate and create

6 Imagine that the Australian Government has decided to give aid to Indonesia to increase its annual rice yield. Write a letter to the Foreign Minister outlining how you think this money should be spent.

2B rich task

Growing rice in Australia

There are about 1600 rice farms in Australia and virtually all of them are in southern New South Wales and northern Victoria. This region is suitable for the growing of rice because of several key environmental factors. The most important of these is the availability of water. Rice farmers in the region irrigate their crops with water from nearby rivers – the Murrumbidgee and the Murray. The soil is also ideal for rice growing as the heavy clay that is present stops water from seeping away. Year-round warm temperatures help the rice to grow and the flat land makes flood irrigation possible.

Although Australian rice growers are the most productive in the world, rice is a controversial crop in this country. Some people feel that growing rice is not a sustainable use of Australia's river water. They argue that the natural environment is suffering because water is being taken from the rivers. A large part of Australia would not be able to support a crop such as rice because its dry soil and low rainfalls could not sustain the amount of water needed for a good crop yield. Supporters of the rice industry believe that rice is a valuable export crop and that Australian rice farmers are becoming better at using less water to grow more rice.

skill**drill**

Estimating the size of features on a map

Estimating the size of features on a map is an important skill for geographers. You can use the scale of maps to estimate the area covered by certain features. If the feature is a regular shape such as a triangle, circle or rectangle, you can apply the skills and formulas you have learnt in mathematics.

If the shape of the feature you are studying is irregular, a grid can be used to estimate its size. For example, on Source 3, a grid with squares representing 20 km × 20 km has been drawn. If your map does not have a grid like this already, you can draw your own. You might like to do this onto a piece of tracing paper that you can then place on top of the map.

Step 1 Count the number of grid squares in which the mapped feature you want to estimate fills the entire square. Write this number down.

Step 2 Now count the number of grid squares that contain some, but not all, of the mapped feature. Take this number and divide it by two.

Step 3 Add these numbers (the result from Step 1 and the result from Step 2) together.

Step 4 Multiply this number by the area of each square. In the following map each square is 20 km × 20 km, or an area of 400 km^2.

Source 1 These formulas can be used to estimate the size of differently shaped features on a map.

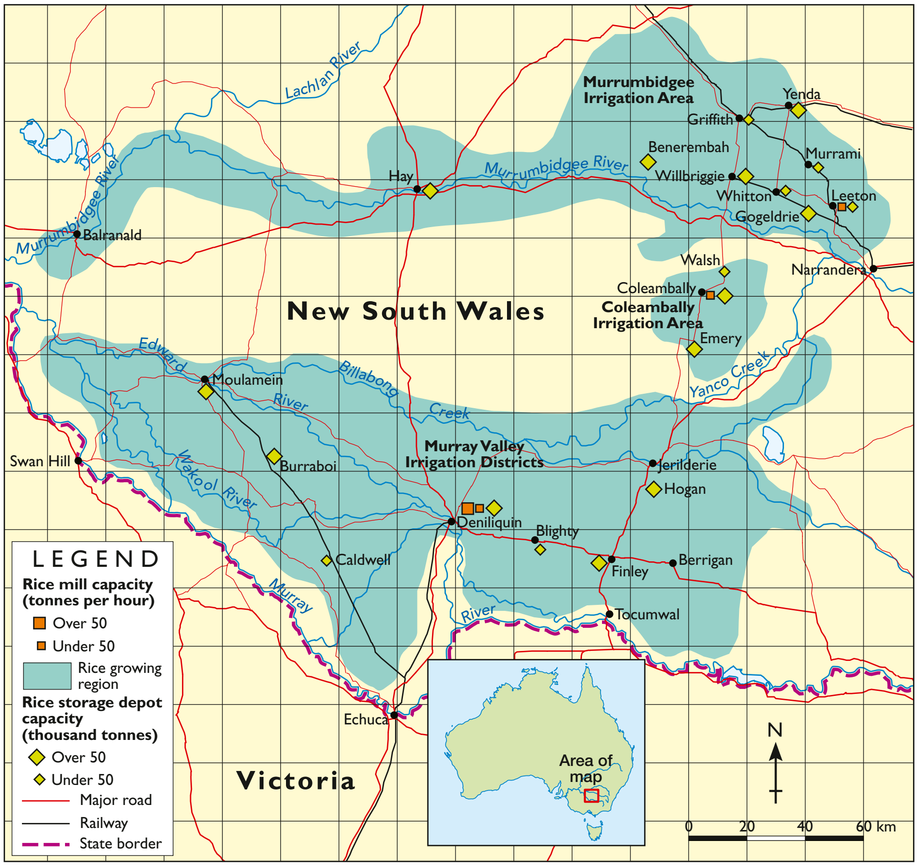
Shape of feature	Formula
Triangle	The base × the height, divided by two
Circle	π (approximately 3.14) × radius squared. The radius is the distance from the centre of its circle to the edge.
Square and rectangle	Width × length

Apply the skill

1 Follow the steps provided to estimate the areas of the three main rice-growing regions shown in the map in Source 3.

Source 2 Rice fields and the main irrigation canal near Leeton, NSW

NEW SOUTH WALES: RICE-GROWING REGIONS



Lachlan River
Murrumbidgee Irrigation Area
Yenda
Griffith
Benerembah
Murrami
Hay
Murrumbidgee River
Willbriggie
Whitton
Leeton
Gogeldrie
Murrumbidgee River
Balranald
Walsh
Narrandera
Coleambally
Coleambally Irrigation Area
New South Wales
Emery
Edward
Moulamein
Billabong
River
Creek
Yanco Creek
Murray Valley Irrigation Districts
Swan Hill
Burraboi
Jerilderie
Wakool River
Hogan
Deniliquin
Blighty
Caldwell
Berrigan
Finley
Murray
River
Tocumwal
Echuca
Victoria
Area of map
N
0
20
40
60 km
LEGEND
Rice mill capacity (tonnes per hour)
Over 50
Under 50
Rice growing region
Rice storage depot capacity (thousand tonnes)
Over 50
Under 50
Major road
Railway
State border

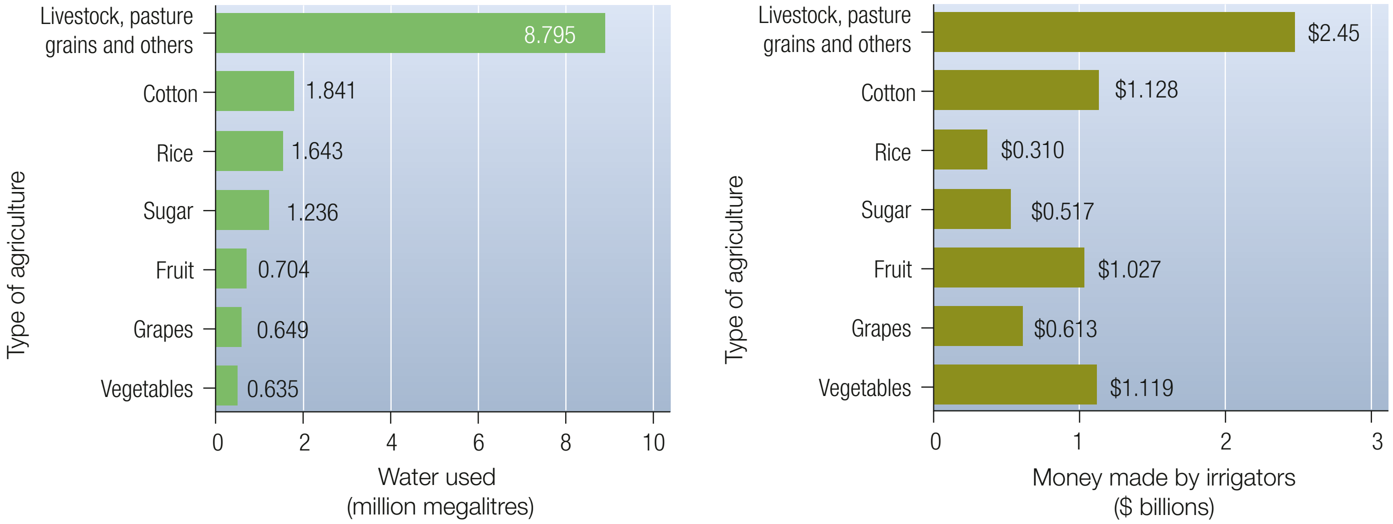
Source 3

Source: Oxford University Press

Extend your understanding

Conduct some further research on rice growing in Australia and then complete the following tasks.

1. Describe and account for the relationship between rivers and rice-growing regions.
2. Compare the photograph of the rice-growing area in Java (Source 3 on page 71) with the rice-growing region of Australia (Source 2). Make a list of all of the differences that you can find. Discuss with a partner why these differences occur. Consider both natural and human factors in your discussion.
3. Examine Source 4. What do these two graphs tell you about the relationship between rice-crop profitability and water usage? What questions could you ask to assess if Australian rice growers are using water sustainably? Write a few paragraphs exploring the link between rice growing and water usage in Australia.

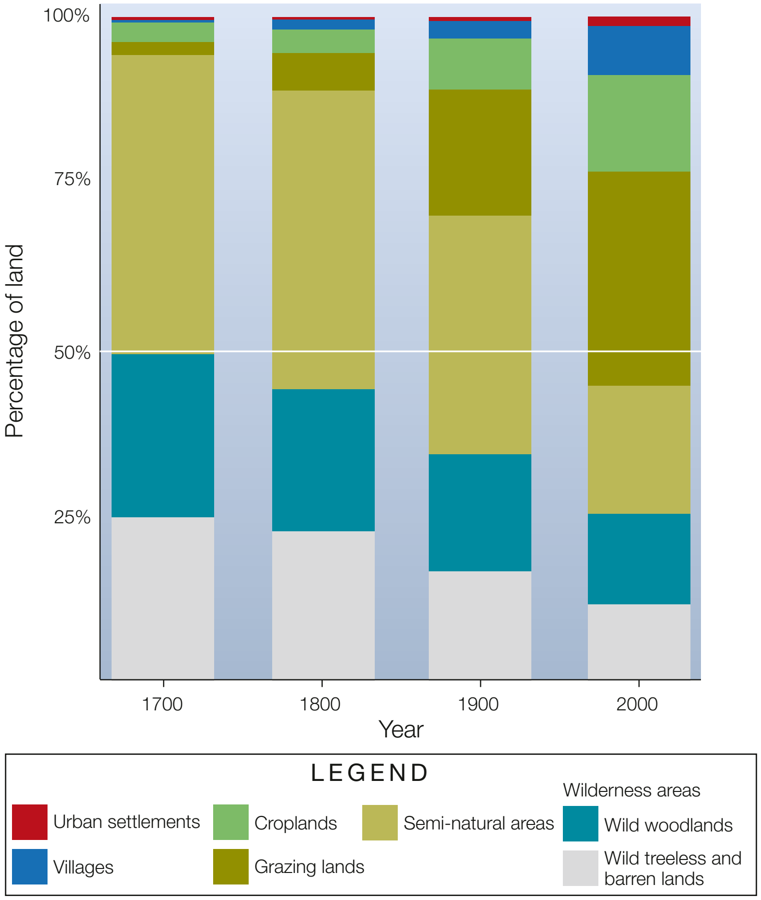


Source 4 Graphs showing the amount of water used for agriculture in Australia (left); and the money made from these types of agriculture (right)

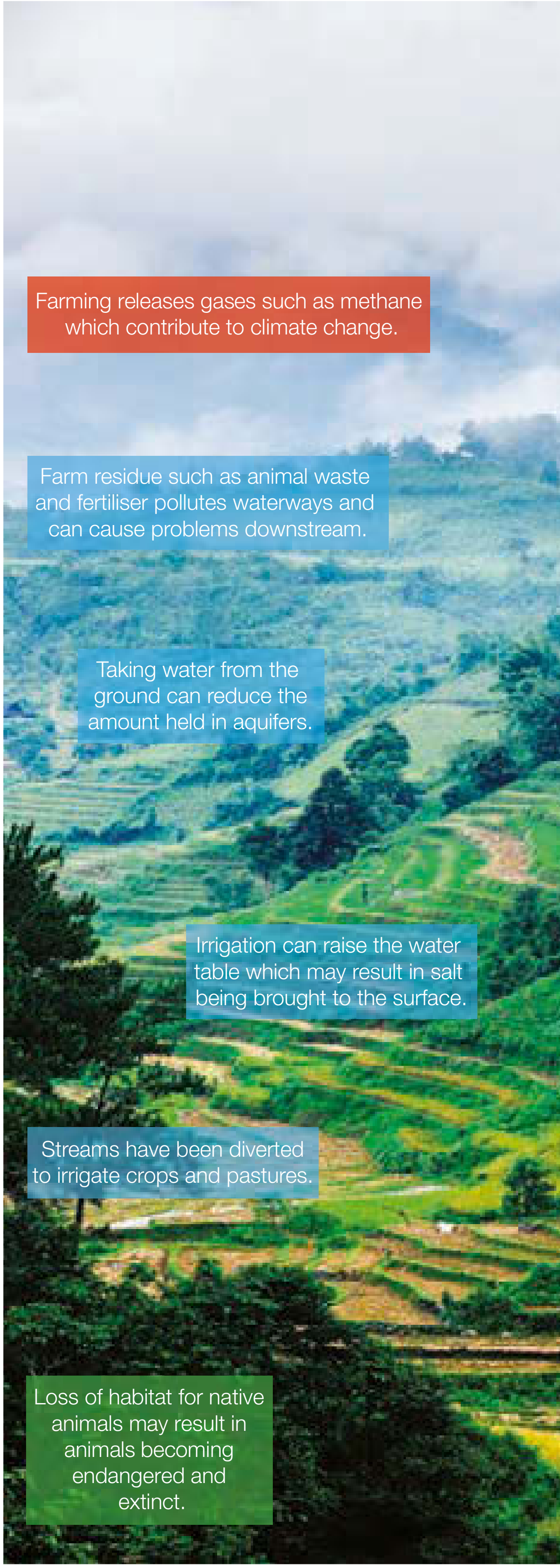
2.15 Alterations to biomes

The last 300 years have seen more extensive change to the Earth's biomes than in any other period in the Earth's history. Over half of the world's land area that is considered habitable has now been converted into farmland or housing to provide food, fibre, shelter and fuel to the world's people – and this area is expanding.

All around the world the natural biomes of forests, grasslands, tundra and even deserts are being converted into farms. In some places, large corporations are converting the land, but in most places it is the work of small-scale farmers, each motivated by the need to provide food for their own families. Source 1 shows the extent of biome change around the world since 1700.



Source 1 Changing land use patterns worldwide between 1700 and 2000



Farming releases gases such as methane which contribute to climate change.

Farm residue such as animal waste and fertiliser pollutes waterways and can cause problems downstream.

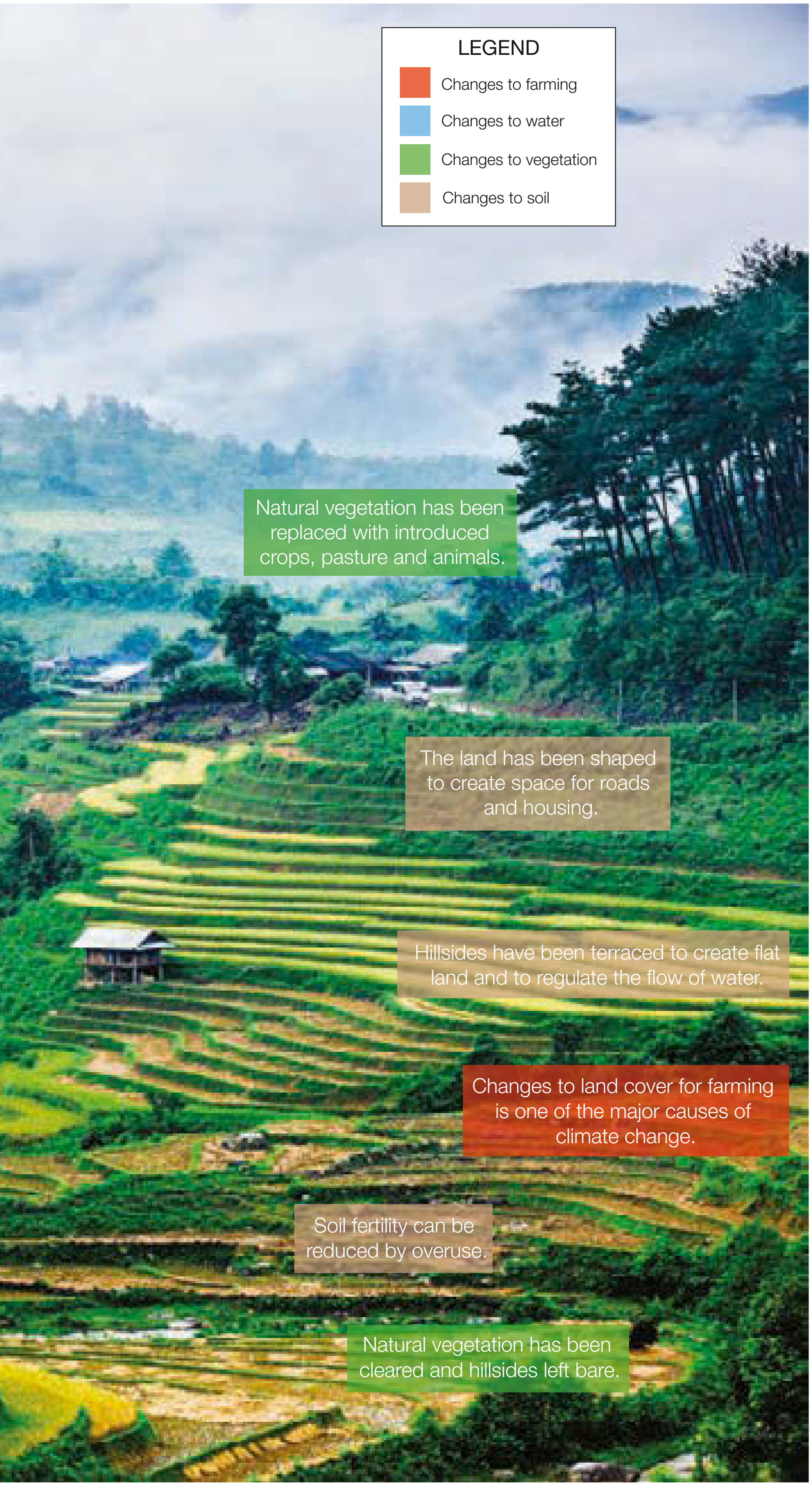
Taking water from the ground can reduce the amount held in aquifers.

Irrigation can raise the water table which may result in salt being brought to the surface.

Streams have been diverted to irrigate crops and pastures.

Loss of habitat for native animals may result in animals becoming endangered and extinct.

Source 2 Some of the changes made to a landscape in China that is being used for farming


LEGEND
🟥 Changes to farming
🟦 Changes to water
🟩 Changes to vegetation
🟫 Changes to soil
Natural vegetation has been replaced with introduced crops, pasture and animals.
The land has been shaped to create space for roads and housing.
Hillsides have been terraced to create flat land and to regulate the flow of water.
Changes to land cover for farming is one of the major causes of climate change.
Soil fertility can be reduced by overuse.
Natural vegetation has been cleared and hillsides left bare.

Check your learning 2.15

Remember and understand

1 How much of the world's habitable land area has been converted into farms?

2 Name three potentially negative impacts that farming can have on the environment.

3 List two changes made on the Chinese farm in Source 2 that involve altering irrigation practices.

Apply and analyse

4 Examine Source 1.
  a Describe the change to the amount of wilderness areas from 1700 to 2000.
  b Use the world biomes map (Source 4 on page 43) to classify the wilderness areas remaining today.
  c Which type of land use has increased the most? Why do you think this is the case?
  d The labels for Source 2 are in four different colours. Suggest a title for each colour.

Evaluate and create

Do some further research on the Internet to complete these tasks.

5 Examine the image of a Chinese farming landscape as shown in Source 2. Describe the landscape as you think it would have been before people arrived in this valley.

6 The labels on this image focus on the ways in which people have changed the landscape. What are the underlying causes of these changes?

7 Compare the changes made on the farm in Source 2 with the technology used in Source 3 on page 67. What differences in productivity do you think the two farms might experience?

2.16 Changing vegetation

Farmers make many changes to the natural environment in order to grow crops and raise farm animals. The greatest changes are made to the natural vegetation. Forests are cut down, burnt and replaced with a single plant species; wetlands and swamps are drained; and vast areas of native grasses are replaced with crops such as wheat and rice.

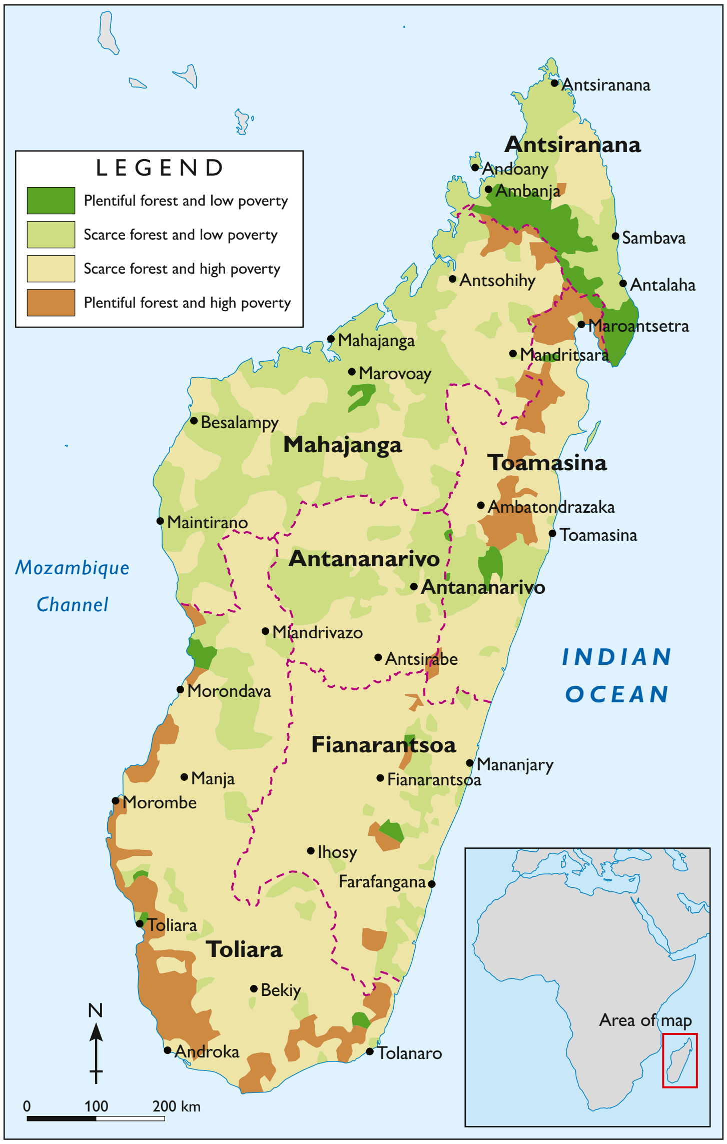
Changes to forests

Around the world about 5 million hectares of forest is converted for agricultural use every year: an area about two-thirds the size of Tasmania. Most of this change takes place in tropical forests, particularly in South America and Africa. Few forests in regions such as North America and Australia have been converted to farmland in recent years, largely because most of the forest has already disappeared. In Australia, for example, around 50 million hectares of forests and woodland have been cleared for farming or affected by logging since European settlement began.

In the developing world, there is a strong link between deforestation and poverty. Millions of people who live below the poverty line and struggle to meet their daily food requirements are becoming small-scale slash-and-burn farmers. They use a machete to slash the undergrowth in forests and then set it alight to clear the land. Seeds are thrown into the warm ashes and in this way a forest has been converted into a farm. The types of farm animals that small-scale farmers raise, such as goats and dogs, push deeper into nearby forest areas to forage for food. Over time as soil fertility declines, the farmers and their animals move into a new patch of forest and begin the process again. In Madagascar, for example, where 80 per cent of the population lives in poverty, only 10 per cent of the natural forest remains.

Source 1 A woman in Madagascar plants a food crop on a burnt hillside.

MADAGASCAR: DEFORESTATION AND POVERTY LEVELS


LEGEND
🟩 Plentiful forest and low poverty
🟩 Scarce forest and low poverty
🟨 Scarce forest and high poverty
🟧 Plentiful forest and high poverty
Antsiranana
Antsiranana
Andoany
Ambanja
Sambava
Antalaha
Antsohihy
Maroantsetra
Mahajanga
Mandritsara
Marovoay
Besalampy
Mahajanga
Toamasina
Ambatondrazaka
Toamasina
Maintirano
Antananarivo
Antananarivo
Mozambique Channel
Miandrivazo
Antsirabe
INDIAN OCEAN
Morondava
Fianarantsoa
Mananjary
Manja
Fianarantsoa
Morombe
Ihosy
Farafangana
Toliara
Toliara
Bekiy
N
Androka
Tolanaro
0
100
200 km
Area of map

Source 2 Source: Oxford University Press

Changes to grasslands

Because the world's most important food crops – rice, wheat and corn – are grasses, they grow best in the world's grasslands biome. However, clearing of native grasses to plant these crops can have devastating effects on the natural environment. Across much of Australia, North and South America, Asia and Africa, native grasses have been cleared and replaced by these three crops to provide food.

This farming then has a further impact on the biome. Because the rice, wheat and corn crops are harvested for human consumption, none of the nutrients from the plant material are returned to the soil. As a result, the soil fertility falls. This means farmers need to add chemical fertilisers to the soil, which further changes its composition. This can impact on the ability of the soil to hold water and can pollute waterways and coasts. Pesticides used to control weeds and insects also pollute the air, soil and water and may kill native plants and animals. Exposed soil becomes vulnerable to erosion by wind and rain and is washed away. Clearing of native grasses to make way for farming has many flow-on effects.

Source 3 Fields of wheat have replaced native grasslands across much of central USA.

Source 4 Conversion of the world's natural grasslands.

Case study regions	Existing grasslands (% of natural cover)	Estimated conversion of natural grasslands (%)		
		Crops	Cities	Other
North American prairie	9.4	71.2	18.7	0.7
South American savanna	21	71	5	3
Asian steppe	71.7	19.9	1.5	6.9
Sub-Saharan African grasslands	73.3	19.1	0.4	7.2
South-west Australian grasslands	56.7	37.2	1.8	4.3

Check your learning 2.16

Remember and understand

1 Describe the link between poverty and deforestation in your own words.

2 Is the scene in Source 3 a natural or human environment? Give evidence from the source for your answer.

Apply and analyse

3 Carefully examine Source 1.
  a List the changes that you can see to the soil, vegetation and water that have taken place in this environment.
  b Add changes that are likely to have occurred that you cannot see.
  c Why has this farmer made these changes to the landscape? What are her likely motivations? Compare these to the likely motivations of the farmer who has changed the grasslands environment shown in Source 3.
  d Examine Source 2. Describe the variations in forest cover between regions of low poverty and regions of high poverty.

4 Examine Source 3.
  a What is the most common land use that replaces grasslands around the world?
  b Which region has converted the most grassland? Suggest a reason for this.

Evaluate and create

5 Use an ICT chart tool, such as Microsoft Excel, to construct pie graphs for the conversion of grasslands in Australia, North America and Sub-Saharan Africa. Describe the differences between these three regions as shown in your completed pie graphs.

2.17 Changing water

Water is one of our most important resources, and agriculture is by far the greatest consumer of water around the world. About 70 per cent of the available water supply is used for agriculture, mostly for irrigation. Once water has been used to grow crops and given to animals to drink, it is, of course, returned to the environment. However, the farming process can change the quality of the water significantly, making it unsuitable for other uses and for the natural environment.

Water pollution from farming

The water that is used on farms eventually flows through soil and rocks into nearby streams and rivers. Bare soil that is not protected by plants and held together by their roots can be washed away in the process, causing streams to become so cloudy that sunlight cannot reach the stream bed. This often kills many aquatic plants and animals.

Fertilisers such as nitrogen, phosphorus and animal manure can also end up in lakes and rivers, causing algae to grow out of control. This starves the water of oxygen and creates 'dead zones' in the water. Upon entering water sources, pesticides used in farming to control insects and weeds can poison fish and native animals, as well as killing the plants that create their habitats.

Source 1 This Filipino farmer is spraying his rice crop with a pesticide to control insect pests. His fields drain into Laguna Bay, which is one of the world's most polluted water bodies and also home to a large freshwater fishing industry.

Changing natural water flows

In many places, rivers are dammed to create a large reservoir of water which can be used for irrigation. In the last 50 years the amount of water held in dams has quadrupled and the volume of water taken from rivers and lakes has doubled. Most of this water is used for farming. The reduced volume of water in the rivers creates major problems for the natural environment and for downstream users. In the lakes near the mouth of Australia's Murray River, for example, the water can be five times saltier than the sea partly because so much water has been extracted for farming that the river cannot flush out the naturally occurring salt.

Check your learning 2.17

Remember and understand

1 How might the farmer shown in Source 1 impact on the quality of fresh water?

2 How can fertilisers that are used on a farm eventually reach and kill fish?

Apply and analyse

3 Examine Sources 2 and 3.

   a Each of the agricultural fields in these images is about 800 square metres in area. Estimate the area covered in 2000 and in 2012.

   b What impact will this change have over time on the volume of underground water in this region?

   c Can you think of the environmental impacts that would result from irrigating using water that has been extracted from under the ground?

Evaluate and create

4 Draw a sketch of a river flowing through a farming region. On your sketch show five different ways in which the farms impact on the quality or quantity of water in the river.

5 Discuss some ways in which the impacts shown on your sketch could be reduced.

keyconcept: Sustainability

Greening the desert

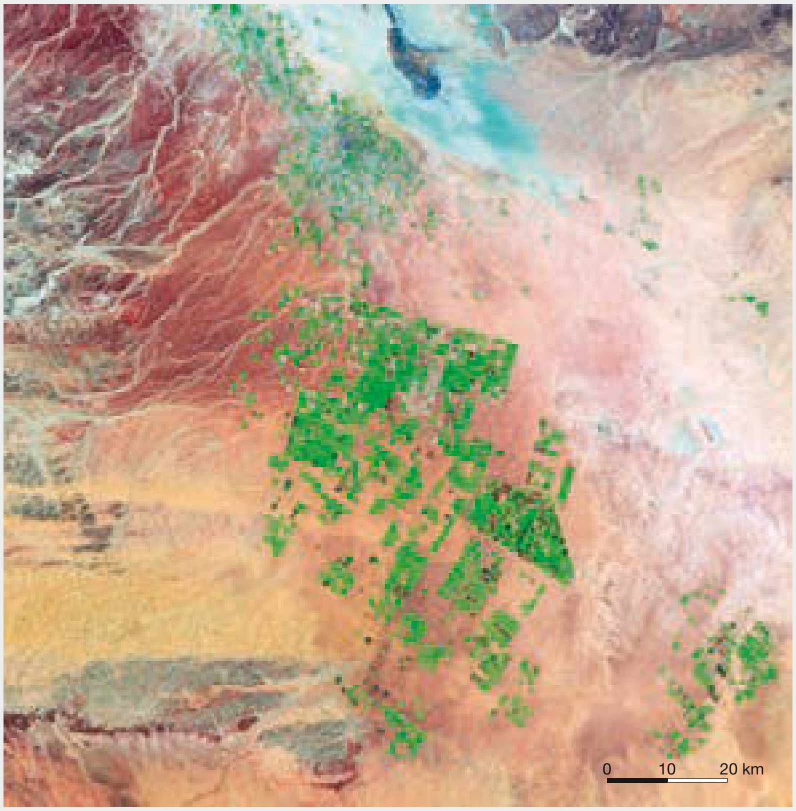
The types of changes being made to tropical rainforests and grasslands in South America and Africa for agricultural use are also being made to biomes in other parts of the world. In Saudi Arabia, for example, sections of the desert have been transformed into farmland for the purpose of growing crops.

Only a few centimetres of rain fall naturally in the Saudi Arabian desert each year, but crops can still be grown there thanks to large aquifers deep beneath the Earth's surface. These aquifers contain water that was trapped between layers of rock during the last ice age. They also store water that has fallen as rain over hundreds of thousands of years.

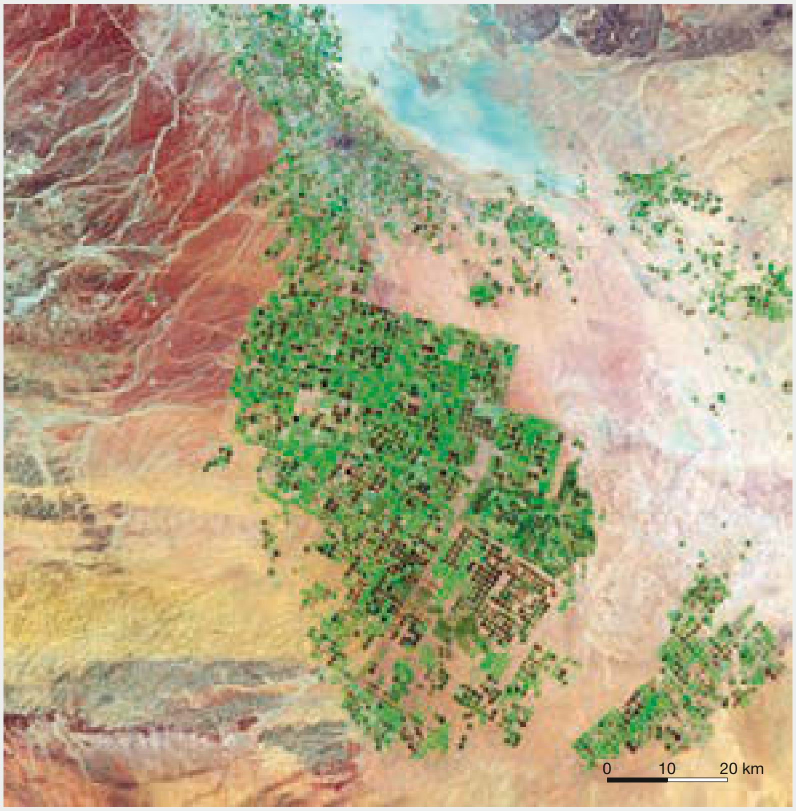
In Saudi Arabia, water is extracted from the aquifers by drilling deep into the ground under the desert floor and pumping it to the surface. Once on the surface, the water is pumped through a circular sprinkler system. This is known as centre-pivot irrigation. Sources 2 and 3 show the dramatic increase in centre-pivot irrigation in Saudi Arabia from 2000 to 2012. These satellite images show healthy vegetation in bright green, dry vegetation in orange and barren soil in pink. Each circular field shown in green is approximately 1 kilometre wide.

Because of the increasing rate at which water is being used, geographers and environmental scientists now believe that this type of farming has become unsustainable – both environmentally and economically. In time, supplies of water in the aquifer will become totally depleted as they are being used far more quickly than they can be replenished. The high cost associated with accessing water from the aquifers also means that crops grown in this way will soon become too expensive to buy.

For more information on the key concept of sustainability, refer to page 9 of 'The geography toolkit'.

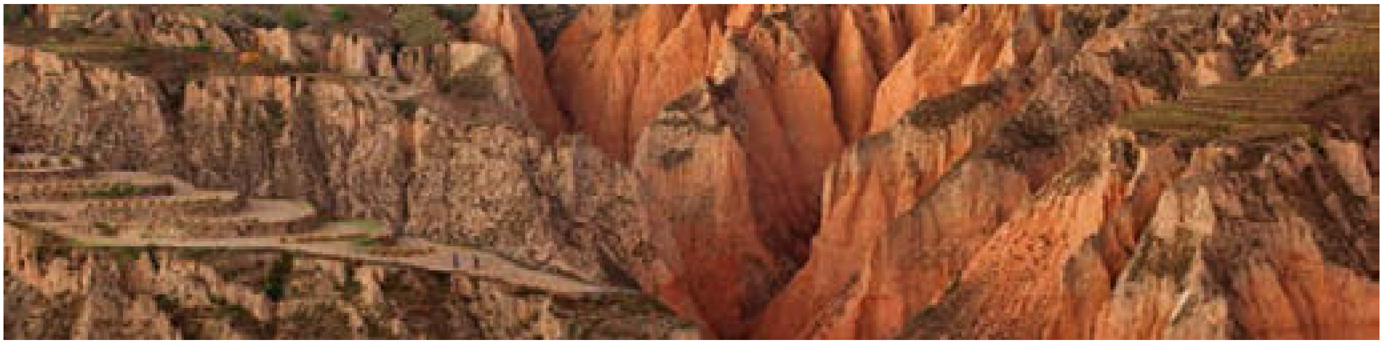


Source 2 Satellite image of the Saudi Arabian desert in 2000.



Source 3 Satellite image of the Saudi Arabian desert in 2012.

2.18 Changes to soil



Source 1 The Loess Plateau in northern China is home to more than 50 million people. Centuries of overuse and overgrazing have resulted in some of the highest rates of soil eroson in the world.

Soil degradation

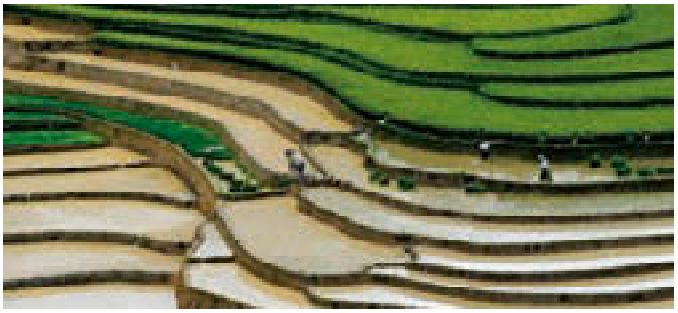
In many places around the world, soils are being degraded to such an extent that the amount of food that can be grown is in decline. It is estimated that about 2 billion hectares of land have been affected in this way, an area that is home to about one-fifth of the world's population. **Soil degradation** occurs because human activities impact on the soil's ability to support plants and animals. These activities include clearing forests to make way for farms and towns, increasing the numbers and density of farm animals, poor irrigation practices and **overfarming**, growing so many crops that the natural nutrients of the soil are removed and not replaced.

Soil degradation takes many forms. At its worst, the soil is broken down and washed away (see Source 1). It is estimated that 75 billion tonnes of fertile soil is lost this way each year. This is largely as a result of forest clearing that allows fragile soils, particularly on sloping land, to be attacked directly by heavy rain. Without the roots of forest plants that help bind the soil together, soil is washed away. In other places, nutrients in the soil, such as nitrogen and potassium, have become so depleted that the soil is unable to support plant life.

Salinity

In Australia, soil degradation often takes the form of **salinity**. Salinity is a condition where the amount of salt causes problems in the soil, and impacts on the environment. There are two types of soil salinity:

- primary salinity, which is a natural condition that develops in the landscape over time.
- secondary salinity, which is caused by human impact.



Source 2 A terraced rice field in Mu Cang Chai, Yen Bai province, Vietnam

Human impact is related to the irrigation of soil to grow crops. Salts in the irrigation water are left in the soil, and eventually the soil becomes too salty for plant life to survive. Secondary salinity also occurs when trees that have deep roots are removed by humans to make way for crops with short roots. Salt held in the **water table** is then able to move up to the soil's surface, killing virtually all plant life. Approximately 2 million hectares of Australian farming land is degraded in this way.

Terracing

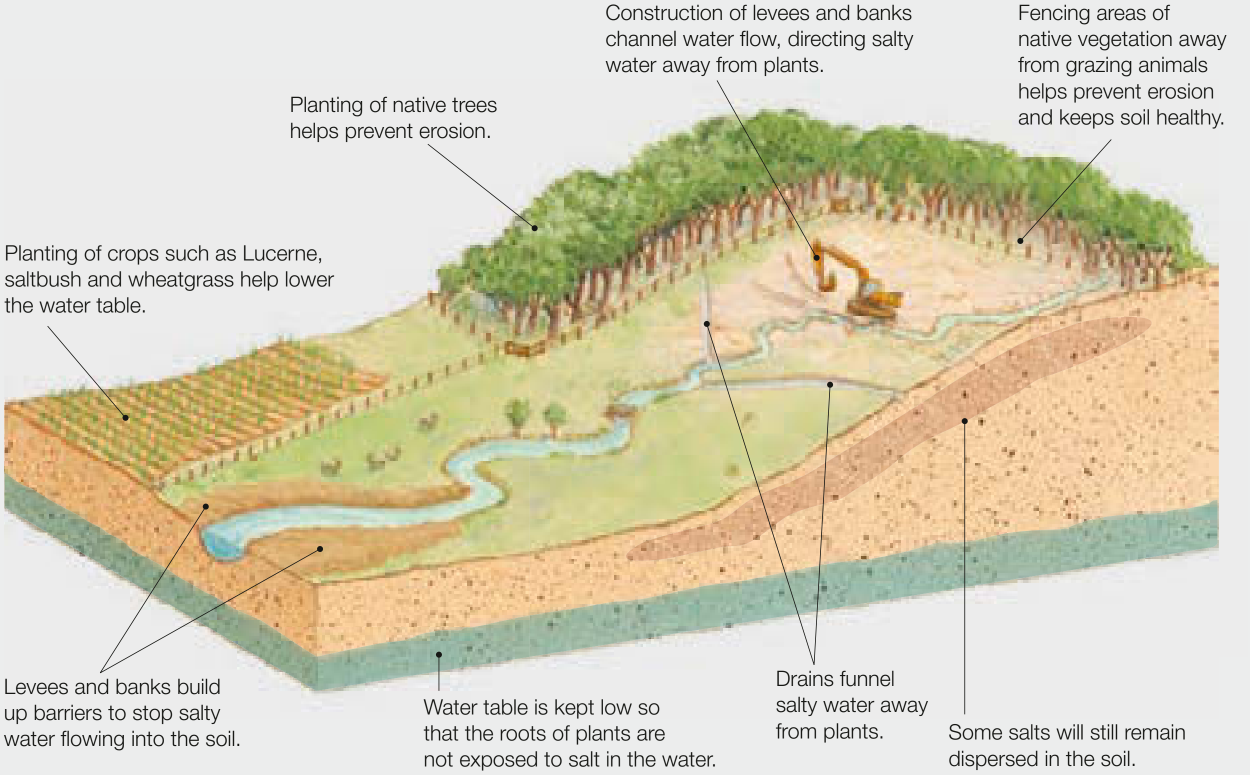
The shape of the land and soil can be altered through terrace farming. Commonly used so that sloping land can be farmed productively, terracing does not always have a negative impact on the landscape. For example, by dividing the land into flatter sections, farmers decrease soil erosion by slowing down water running downhill. But terracing can sometimes catch too much water, especially during heavy rainfall. This saturates the soil, leading to overflowing terraces that can cause more soil erosion than the normal run off. While terracing can improve soil erosion, it must be carefully maintained so that it does not cause further damage to soil.

keyconcept: Sustainability

Managing salinity

Many Australian farmers, particularly in Western Australia, have responded to the threat of soil salinity by changing the ways in which they farm the land. Some of these changes have been more successful than others but all are designed to use the soil in a more sustainable way. Source 3 shows some of the strategies used by farmers to combat soil salinity. The most successful strategy used so far appears to be lowering the level of the water table which keeps salt in the water away from plants.

For more information on the key concept of sustainability, refer to page 9 of 'The geography toolkit'.


Construction of levees and banks channel water flow, directing salty water away from plants.
Fencing areas of native vegetation away from grazing animals helps prevent erosion and keeps soil healthy.
Planting of native trees helps prevent erosion.
Planting of crops such as Lucerne, saltbush and wheatgrass help lower the water table.
Levees and banks build up barriers to stop salty water flowing into the soil.
Water table is kept low so that the roots of plants are not exposed to salt in the water.
Drains funnel salty water away from plants.
Some salts will still remain dispersed in the soil.

Source 3 A range of responses and strategies can be used to tackle salinity.

Check your learning 2.18

Remember and understand

1 What is salinity? Why is it considered to be a cause of soil degredation?

2 How does forest clearing lead to soil degradation?

Apply and analyse

3 How has the farmer in Source 3 managed salinity on the farm?

4 Select one of the farmer's strategies and comment on its potential effectiveness.

5 Examine Source 1 showing soil erosion in northern China.

  a What evidence is there that this is a farming area?

  b How has farming changed the soils in this place?

  c Compare this image to the image of rice terraces seen in Source 3 on page 71. Both these areas have been farmed in the same way but one has experienced soil erosion while one has not. Brainstorm the possible reasons for these differing outcomes.

Evaluate and create

6 The eroded soil in Source 1 was once some of the most fertile soil in the world. Describe and sketch a system that would help to slow or reverse soil erosion in this place.

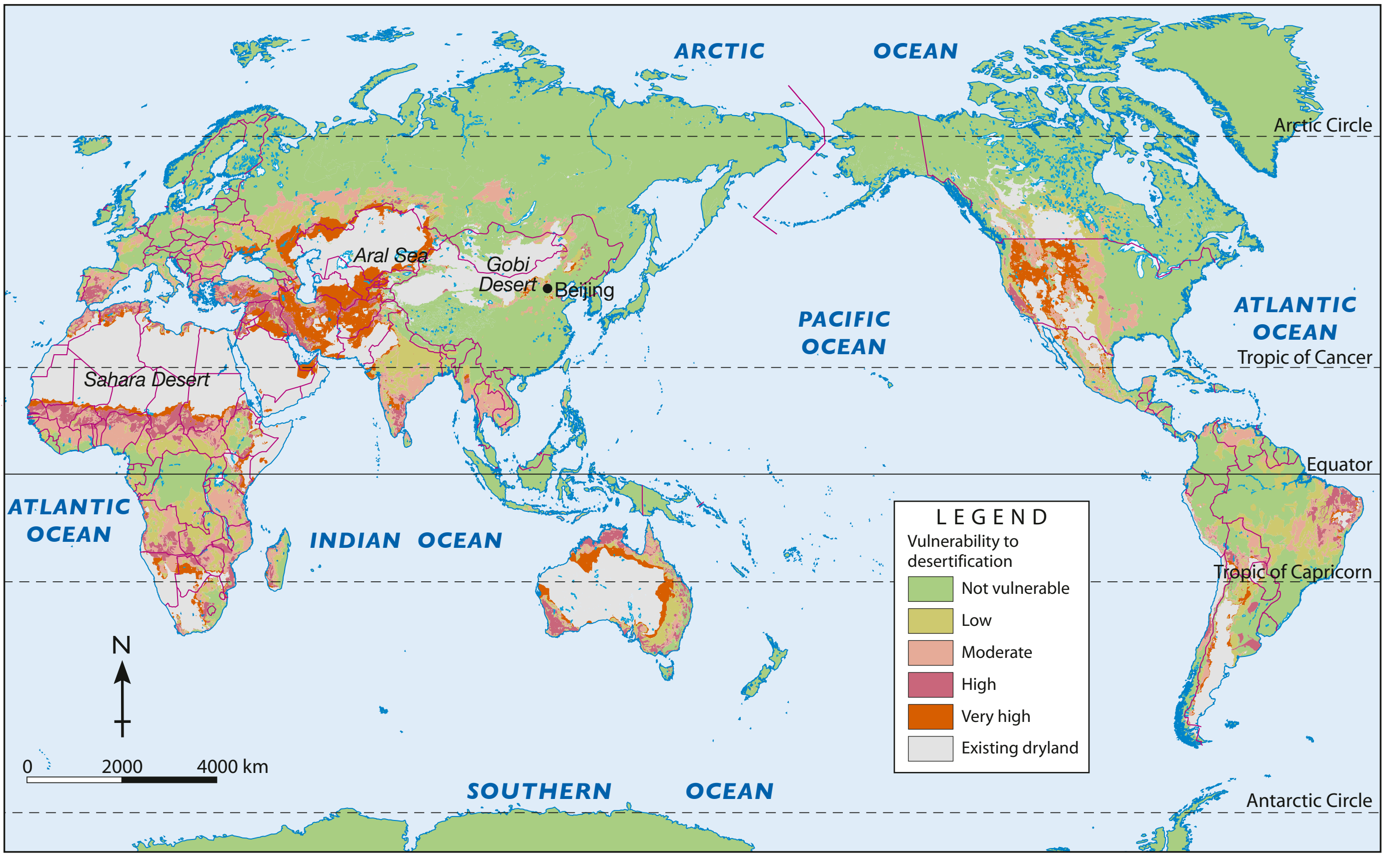
2.19 Spreading deserts

Another type of land degradation that affects millions of people around the world is **desertification**. Desertification is a process by which a region gradually becomes drier, and loses its bodies of water, vegetation and wildlife until it becomes a desert. As a result of desertification, soil and cropland that was once fertile and productive can become so dry, infertile, salty and heavily eroded that it can no longer be used to grow food and raise livestock. According to the research by the United Nations Desertification Convention released in 2013, there are currently 168 countries at risk from desertification.

There are many human activities that can lead to desertification, but they are all related to the overuse of the land and water in vulnerable regions. This includes overgrazing by animals such as cattle and goats, the removal of forest cover, the use of trees and shrubs for firewood, extracting water from the ground, poor irrigation practices and growing crops on marginal farming land (land that is difficult to farm). Natural factors including drought can also contribute to desertification.

The United Nations currently estimates that the **food security** of about 250 million people around the world is directly affected by desertification. They believe that the food security of a further one billion is also threatened. There are many effects of desertification: sandstorms, crop losses, famine, environmental refugees and conflict are all direct or indirect results of desertification. About 12 million hectares of land are lost every year to desertification, which is about twice the size of Tasmania. It is estimated that this results in an annual loss of 20 million tonnes of grain. Most of this occurs in developing regions in Central Asia and Sub-Saharan Africa, further contributing to food insecurity in those regions.

WORLD: DESERTIFICATION VULNERABILITY


ARCTIC OCEAN
Arctic Circle
Aral Sea
Gobi Desert
Beijing
PACIFIC OCEAN
ATLANTIC OCEAN
Tropic of Cancer
Sahara Desert
Equator
ATLANTIC OCEAN
INDIAN OCEAN
Tropic of Capricorn
LEGEND
Vulnerability to desertification
Not vulnerable
Low
Moderate
High
Very high
Existing dryland
N
0 2000 4000 km
SOUTHERN OCEAN
Antarctic Circle

Source 1

Source: Oxford University Press

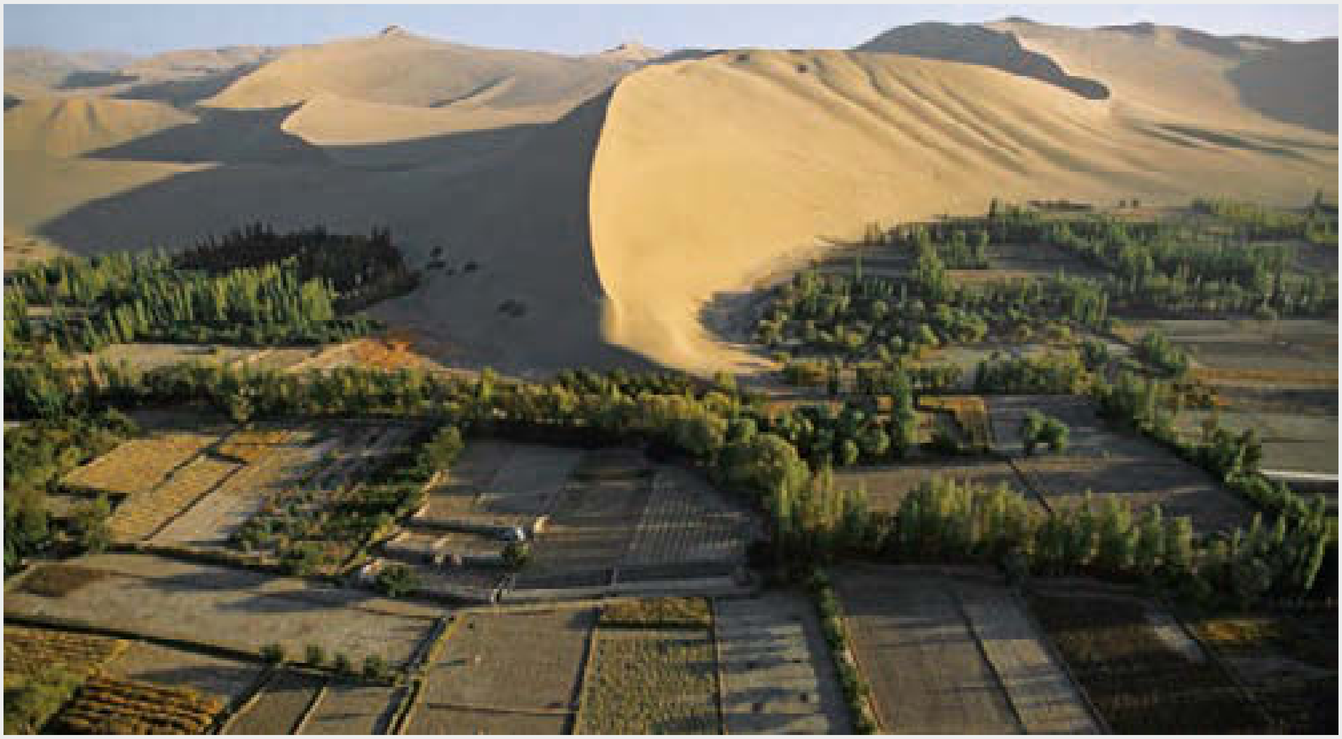
keyconcept: Environment

The Green Wall of China

Over the next few decades, the Chinese government has plans to plant over one billion trees in an attempt to halt the advance of the Gobi desert over productive farmland across vast areas of China. Nicknamed the Green Wall of China, this line of trees is expected to extend for 4480 kilometres and cover 4 million square kilometres on the desert margins.

Despite some local success stories, not all experts are convinced the wall will halt desertification. In fact, some geographers argue that it may even add to desertification over the longer term as the trees require large amounts of water to help them grow.

For more information on the key concept of environment, refer to page 8 of 'The geography toolkit'.



Source 2 A line of trees on the edge of the Gobi Desert in China helps to protect crops from being covered in sand.

Check your learning 2.19

Remember and understand

1 What is desertification? What are some of the direct and indirect results of desertification?

2 Name three human activities that can lead to desertification.

3 How does desertification lead to food insecurity?

Apply and analyse

4 Using Source 1, describe the global pattern of desertification. Ensure you name specific countries, regions and continents in your description.

5 What is the spatial association between existing dry lands and areas vulnerable to desertification? Explain why this spatial association exists.

6 How do you think desertification may lead to wars between countries or civil conflicts within countries?

Evaluate and create

7 In what ways might climate change be a leading cause of desertification in some regions of the world?

8 How effective do you believe the line of trees shown in Source 2 will be in stopping the advancing sand dunes of the Gobi Desert? Give some reasons for your answer.

2C rich task

The impact of changing diets

The diets of many people around the world are changing and the foods they are choosing to eat are having significant impacts on the environment. As the wealth and wellbeing of people in countries such as China and India increase, the diets of people there are gradually changing. With greater wealth, many people in India and China are moving from a diet based almost entirely on grains and plants to a diet with more protein from meat and dairy products. Food-production industries – such as the fast-food sector – are also changing to take advantage of this growing demand.

skill**drill**

Analysing secondary geographical data and drawing conclusions

It is important for geographers to be able to correctly interpret data that has been collected and represented by other people. They often need to use secondary data sources to draw conclusions about what they have found. By following these steps you will learn to interpret a range of secondary data sources (e.g. graphs, tables, reports) and use them to reach conclusions about your investigation.

Step 1 Once you have gathered a range of secondary data sources for your investigation, look at each source carefully.

Step 2 For each source of information, write down two or three key facts that are presented.

Step 3 Try to summarise the key focus of each data source in one or two sentences. Identify any patterns or exceptions that you notice.

Step 4 Pay particular attention to the title, the date of the data and its source. Is the information contained in the source already dated, is it still relevant, or is it commenting on a situation or place at a particular point in time?

Source 1 A new KFC store opens in China at the rate of about one per day. As of 2015, there were 5003 KFC stores across China, many open 24 hours a day.

Step 5 Remember to check the information on graphs carefully. Pay particular attention to ranges of figures and make sure that you understand the classifications. Are things being measured in kilograms or tonnes, for example? If the figures are in kilograms in one source and in tonnes in another, you will need to convert the figures to the same units of measurement in order to understand and compare them.

Step 6 Remember to think about bias – ask why the author has written the piece of information. Are they trying to influence opinion on an issue? Are you getting the complete picture? Try to find a range of sources on the same subject to ensure you have the most complete data available.

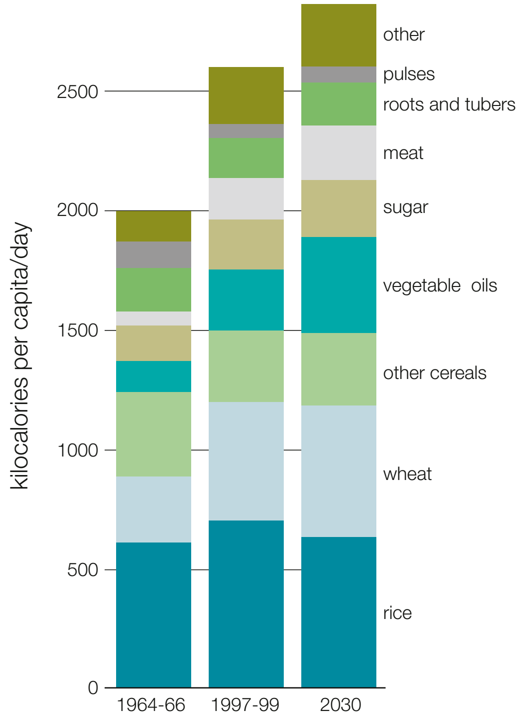
Step 7 Compare the facts and figures you have summarised. It may be helpful to use the PQE method to do this.

Step 8 Use your notes to reach your own conclusion about the key question or issue that you are exploring. Support your conclusion with information from the data.

Step 9 Present your conclusion to an audience. This may be done verbally, graphically or in a written form. Whatever form you choose, make sure you use the evidence you have gathered to support your conclusion.

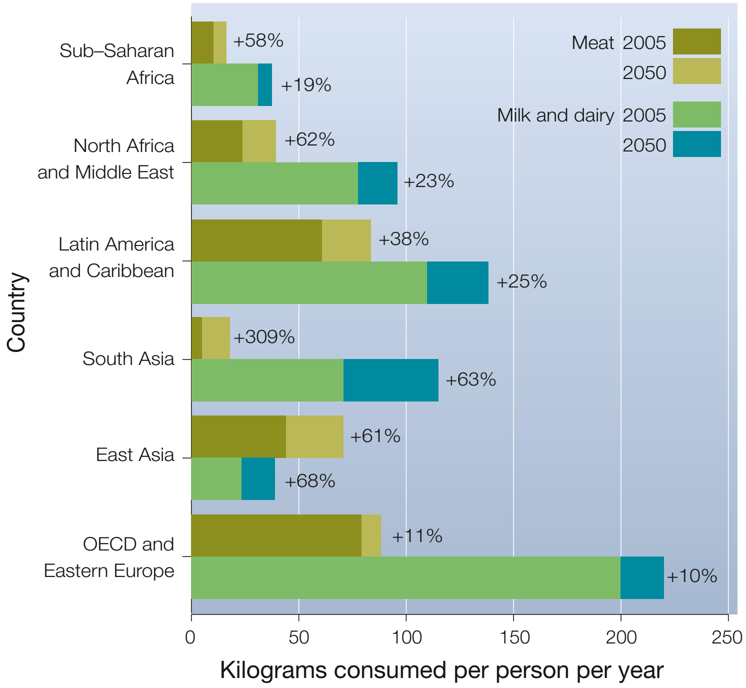
Apply the skill

1 Examine the information presented in Sources 2, 3 and 4 and follow the steps provided to draw a conclusion about the environmental impact of changing diets.



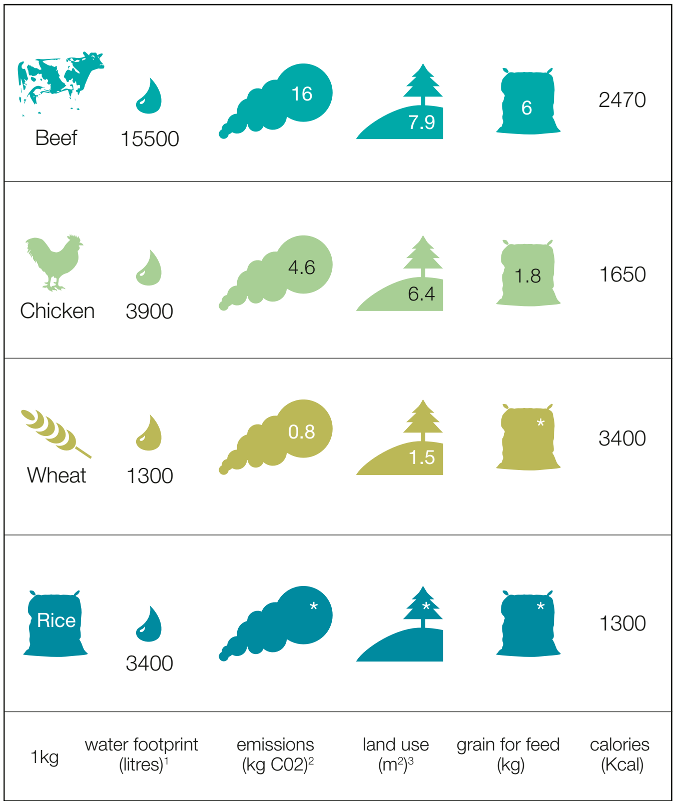
Source 2 A compound column graph showing observed and predicted changes in the human diet between 1964 and 2030

Source: http://www.unep.org/pdf/foodcrisis_lores.pdf



Source 4 Projected changes in meat and dairy consumption from 2005 to 2050

Source: http://ccafs.cgiar.org/bigfacts/dietary-change/



1kg	water footprint (litres)[1]	emissions (kg C02)[2]	land use (m^2)[3]	grain for feed (kg)	calories (Kcal)
Beef	15500	16	7.9	6	2470
Chicken	3900	4.6	6.4	1.8	1650
Wheat	1300	0.8	1.5	*	3400
Rice	3400	*	*	*	1300

Source 3 The ecological footprint of different food types

Source: Oxford University Press

Extend your understanding

1 Use the information presented here to suggest ways in which people in developed countries such as Australia could reduce the environmental impacts of their diets.

2 Design an advertising campaign to communicate your findings to the Australian public.

Here are some facts you might consider:

- Meat consumption is expected to increase from 39 kg/person/year in 2009 to over 52 kg/person/year by 2050 (FAO, 2006).
- By 2050, 50 per cent of cereal grown may be used to feed animals for human consumption (UN report, 2011).
- Currently, 33 per cent of total farming land is used for producing animal feed (UN report, 2011).
- Today, the number of urban residents is growing by nearly 60 million every year. By 2050, the urban population will almost double to 6.4 billion people. Almost all urban population growth in the next 30 years will occur in cities of developing countries (World Health Organisation, 2013).

Biomes and food security

Food security

Compared to most people around the world, Australians have very reliable access to a wide variety of different foods. High wages and a strong economy mean that many Australians can afford to buy and prepare the food they need and rarely worry about where their next meal is coming from.

Unlike people in Australia, these Somali women are waiting in line to receive food from an aid organisation in the capital city, Mogadishu. They are victims of a food shortage that affected 10 million people in African nations in 2011–12. A widespread shortage of food is known as a famine. Famine can be caused by many factors including drought and war. Food experts are warning that famines are likely to become more severe and widespread as the Earth's climate changes and the human population continues to grow. Some argue that food security is the greatest single issue facing the world today.

3A

What is food security?

1 Make a list of the different things you have eaten in the last 24 hours.

2 How different do you think your list would look compared with one of the women shown in Source 1?

3B

What are the main challenges to food production?

1 Brainstorm some of the ways in which food production is threatened around the world, including in Australia.

2 Some areas of the world, such as the Horn of Africa, are more at risk of famine than other places. Why do you think this is the case?

chapter 3

Source 1 These people are victims of the famine in the Horn of Africa. Drought, conflict and restrictions on delivery of food aid caused the famine (one of the world's biggest humanitarian emergencies) in 2011–12.

3C

How can we improve food security?

1 What is being done in Somalia to improve the food security of people affected by famine?

2 The United Nations set the target of halving hunger by 2015. Do you think this was possible? Give some reasons for your answer.

3.1 Food security

Food security is a state where all people at all times have access to enough safe, nutritious food to sustain a healthy life. For a person, community or country to have a secure food supply they must have three things:

- food availability
- food accessibility
- knowledge and resources to use food appropriately.

People who do not have food security suffer from hunger and illnesses related to lack of food, such as malnutrition. About 870 million people around the world do not have food security – the majority of them live in developing countries.

Food availability

Food availability means people have enough food of appropriate quality available on a consistent basis. This may include production, storage, distribution and exchange of foodstuffs, provided reliably and regularly. People whose food availability relies solely on the production of a single crop, for example, may find themselves at great risk of **food insecurity** if that crop fails.

Many countries have strategies in place, such as growing a variety of crops, to maximise their food availability and ensure food security. Management of fishing and fishing industries is also used by some communities to ensure a constant supply of fish is available to sustain them. Food availability alone, however, does not guarantee food security.

Food accessibility

Food accessibility means physical and economic access to food. That is, there needs to be enough food available and it must be in reach of those who need it. Many food researchers believe that the world's farmers produce more than enough food to meet the needs of every person on Earth. However, the food is not distributed evenly. **Developed countries** have more food than they need and high levels of wastage, while many people in **developing countries** struggle to access enough food to meet their daily needs. The reasons for this uneven distribution are many and complex. They include social, political and economic factors, such as rising prices, trade agreements and quotas set up between countries.

Source 1 In many coastal communities in Arnhem Land, the ocean provides food security. Local knowledge ensures the catch will be prepared in a safe and appropriate way.

Source 2 Australia is a country that has a high level of food accessibility – many people enjoy good access to a wide variety of food.

Knowledge and resources to use food appropriately

Appropriate use of food means using food safely and applying knowledge about nutrition, clean water and sanitation when preparing food.

What is appropriate use of food varies between different places and cultures. What is appropriate and usual to eat in one part of the world might be viewed as unusual somewhere else. In many Asian countries, for example, insects and other invertebrates such as scorpions and spiders are regularly eaten as part of a balanced diet (see Source 3). Local cultural knowledge means these insects are prepared properly, making them safe to eat and nutritious. This is an example of appropriate use of food. Knowing how to use such foods appropriately could potentially stave off the incidence of food insecurity. In fact, the United Nations has identified insects as the 'forgotten food crop' as they could help alleviate food insecurity, particularly in developing countries.

Source 3 Deep-fried scorpions ready for sale at a Beijing street market

Check your learning 3.1

Remember and understand

1 What are the three factors that contribute to food security?

2 Describe and explain food security in Australia with reference to these three factors.

Apply and analyse

3 Where does most of your food come from? How would your answer differ if you lived in another country, for example, Vietnam? Explain the reasons for your answer.

4 Quentin, the boy in Source 1, shows that he has food availability and food accessibility. To have food security he now has to use the food appropriately and prepare it ready for eating. Do you know how to prepare his food? Do you think that he does? What does this tell you about food security?

Evaluate and create

5 Find images of foods from around the world and display them on your classroom wall. Use your examples to explain why food preferences and food security differ between places and cultures.

6 It is estimated that about 870 million people suffer from hunger due to poor food security. Of the three factors that contribute to food security, which do you believe is most important? Discuss your thoughts with a partner and then share your thoughts with the class.

3.2 Levels of food security in different places

People living in different parts of the world experience different levels of food security. People in developed countries including North America, Western Europe and Australia, for example, generally have very high levels of food security. Food is available, accessible and appropriate to a high proportion of the population in these places. At the other end of the scale, many people in developing countries, particularly throughout Asia and Sub-Saharan Africa, do not have food security. Food security can be impacted by a number of factors such as unequal access to good farming land, education, technology and natural resources. Fast population growth, conflict and natural disasters can also contribute to a person's inability to access food, by decreasing the amount of available food per person.

Forces impacting on food security

Poverty and food insecurity are closely linked. Individuals who suffer from poverty struggle to meet their basic daily food needs and spend a greater percentage of their income on food than those in wealthier countries. This makes them highly vulnerable to forces that change the availability and accessibility of food. If the price of food suddenly increases, for example, food that they could previously afford becomes unaffordable.

Source 1 The people of Zimbabwe in southern Africa have one of the lowest levels of food security. This girl is scavenging for food in a rubbish dump near the capital, Harare.

Source 2 One of the most food-secure nations in the world is the United States, where the majority of people have access to a reliable, safe and nutritious food supply.

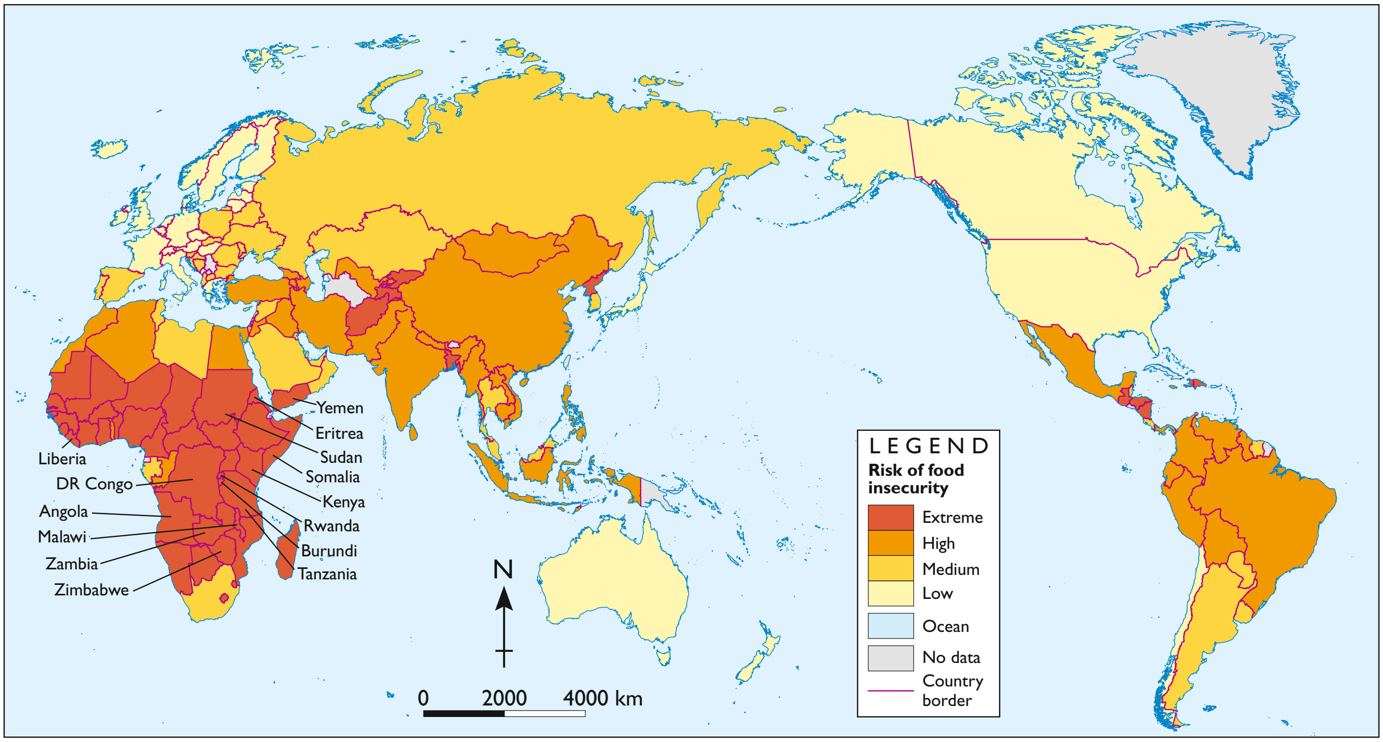
Other forces that can impact severely on those who do not have food security include natural disasters, such as drought or flood. Many people in poor areas rely on local agriculture for food, so food sources can be left damaged or destroyed following natural disasters. Human activities can also affect food security in many places. Armed conflicts may interrupt usual markets and food supply lines, or land used for growing crops may be repurposed for other uses, which results in local food supplies being affected. Those without food security are much more vulnerable to change that is caused by outside forces.

Global patterns of food security

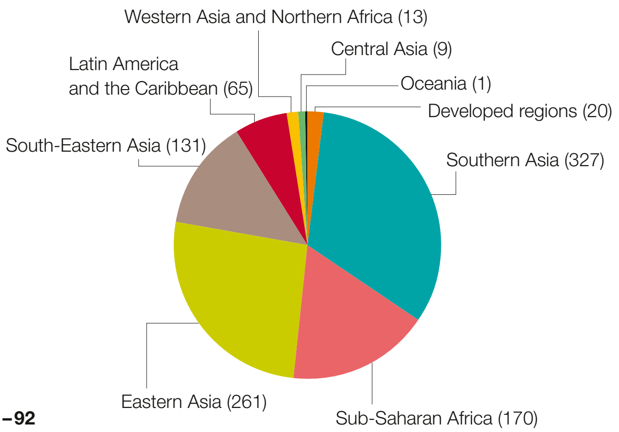
Source 3 shows the global pattern of food security and insecurity. Scores for each country were calculated using 18 different indicators, including the nutrition and health status of the population, the availability of food staples such as rice, wheat and corn, and access to these foods. Countries were then grouped into four categories according to their risk of experiencing widespread food insecurity.

The global distribution of food security is not static. The number of **undernourished** people in the world, for example, has fallen by more than 130 million in the last 20 years, despite the world's population growing by more than 1.5 billion in the same period. The distribution of undernourished people in the world has also changed (see Source 4).

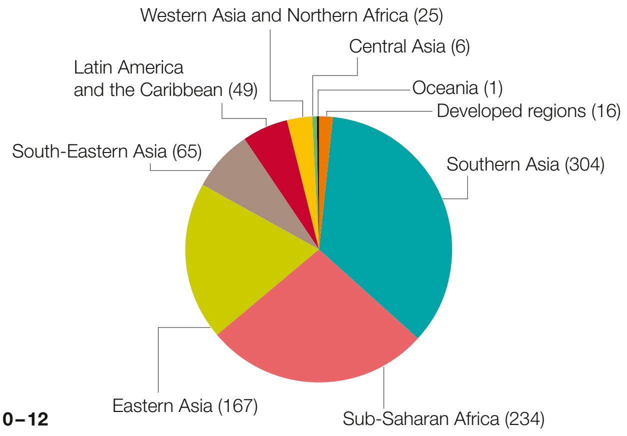
WORLD: FOOD INSECURITY LEVELS


Yemen
Eritrea
Sudan
Somalia
Kenya
Rwanda
Burundi
Tanzania
Liberia
DR Congo
Angola
Malawi
Zambia
Zimbabwe
N
0
2000
4000 km
LEGEND
Risk of food insecurity
Extreme
High
Medium
Low
Ocean
No data
Country border

Source 3 Source: Oxford University Press



1990–92



2010–12

Source 4 The distribution of hunger in the world is changing. These charts show the number of undernourished by region, 1990–92 and 2010–12, in millions.

Check your learning 3.2

Remember and understand

1 How are poverty and food insecurity linked?

2 Compare the food security of the two individuals shown in Sources 1 and 2. Comment on the food availability, accessibility and appropriateness for each of these people.

Apply and analyse

3 Examine Source 4 which shows the 1990–92 distribution of undernourished people in various parts of the world compared with the 2010–12 distribution.

  a What has happened to the overall number of undernourished people over the past 20 years?

  b Which regions have seen an overall increase of undernourished people?

  c Is this change reflected in Source 3?

4 Describe the distribution of global food insecurity using the PQE method (for more information on the PQE method, refer to page 19 of 'The geography toolkit').

5 Discuss the factors that may be responsible for the pattern you have described.

6 Australia is described as having a low risk of experiencing food insecurity. Why do you think this is the case?

3A rich task

Food insecurity in the Horn of Africa

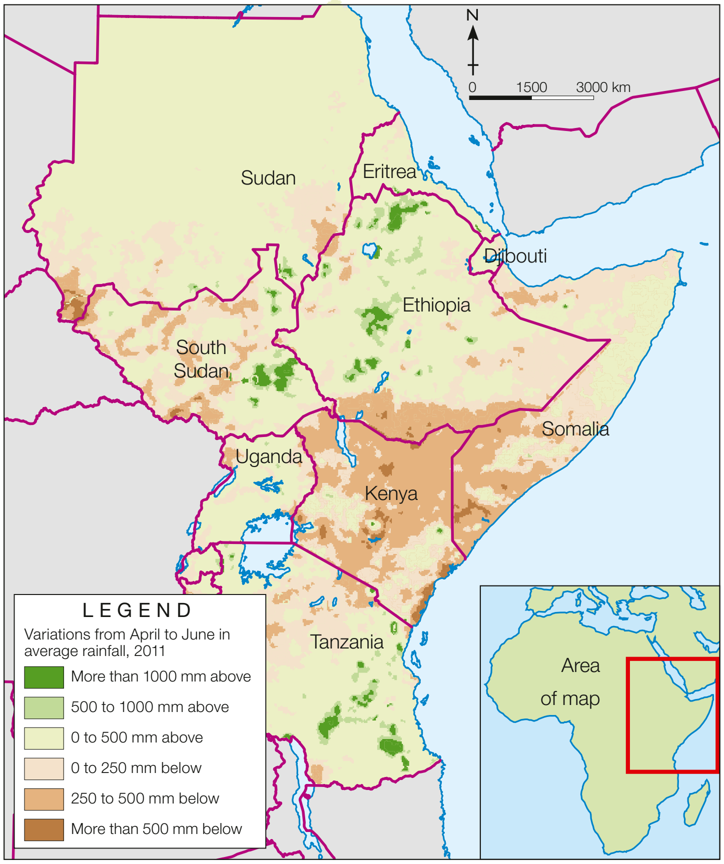
The Horn of Africa refers to the countries in the north-east of the African continent. Ethiopia, Eritrea, Somalia and Djibouti are the four countries that officially make up the Horn, but Kenya, South Sudan, Sudan, Uganda and even Tanzania are sometimes considered to be part of the Horn of Africa. It covers an area of approximately 2 million square kilometres and is home to around 100 million people.

People who live in countries on and around the Horn of Africa often experience food insecurity. This is mainly due to a combination of natural processes and human activities. In 2011–12, the area experienced the worst drought in decades. It caused the widespread devastation of millions of hectares of vital food crops and led to the deaths of hundreds of thousands of people by starvation and malnutrition. The United Nations declared the area to be in the grip of a famine, the first announcement of its type in nearly 30 years.

At its most severe, the drought and subsequent **famine** brought food insecurity to more than 13 million people in the Horn of Africa as well as in neighbouring countries, including Kenya, Uganda and South Sudan. The situation was worsened by an ongoing conflict in southern Somalia that made it difficult for aid agencies to deliver food to the communities in need. As many as one million people fled the affected areas causing a further humanitarian crisis as **refugee** camps struggled to accommodate the flood of new arrivals.

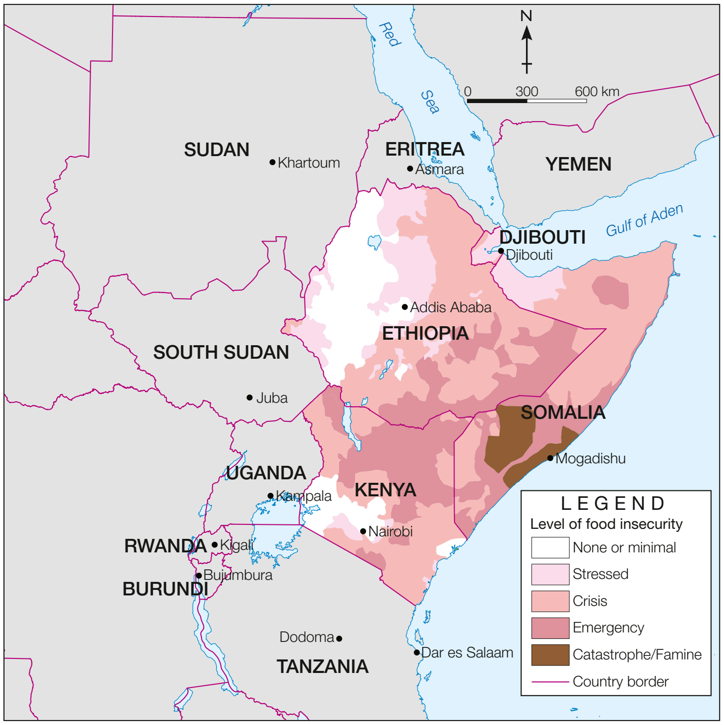
Local people in need of assistance as at 5 September 2011	
Ethiopia	4.6 million
Djibouti	146 600
Somalia	4 million
Kenya	3.8 million

THE HORN OF AFRICA: VARIATIONS FROM AVERAGE RAINFALL, 2011

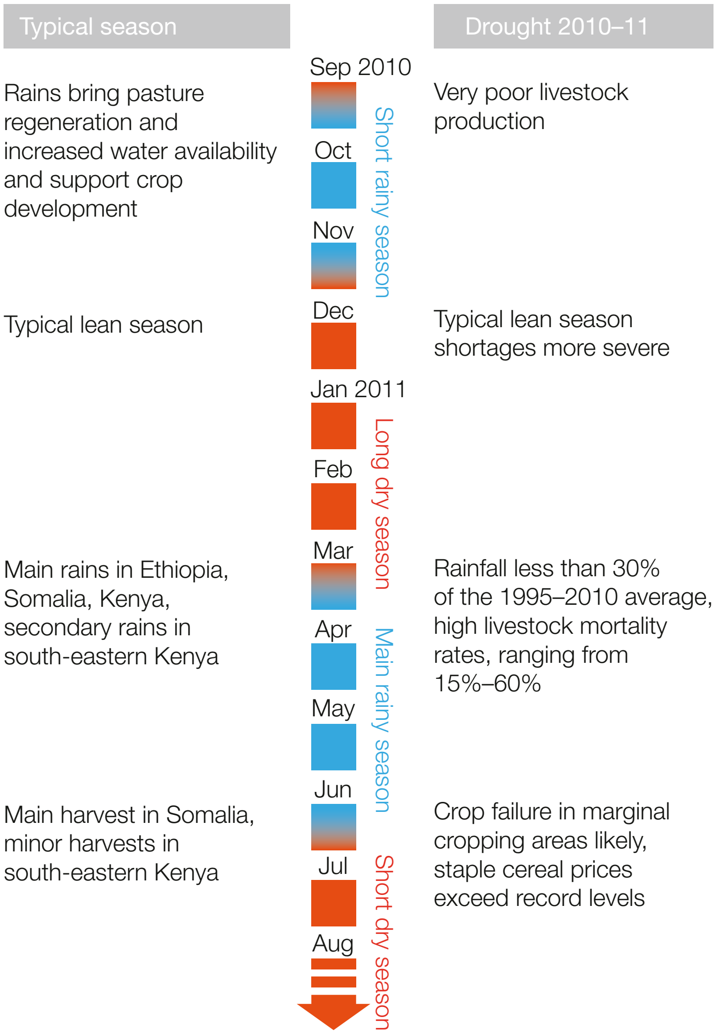

N
0
1500
3000 km
Sudan
Eritrea
Djibouti
Ethiopia
South Sudan
Somalia
Uganda
Kenya
Tanzania
Area of map
LEGEND
Variations from April to June in average rainfall, 2011
More than 1000 mm above
500 to 1000 mm above
0 to 500 mm above
0 to 250 mm below
250 to 500 mm below
More than 500 mm below

Source 1 Source: Oxford University Press

THE HORN OF AFRICA: FOOD INSECURITY SNAPSHOT, 2011–12


N
0
300
600 km
Red Sea
SUDAN
Khartoum
ERITREA
Asmara
YEMEN
DJIBOUTI
Djibouti
Gulf of Aden
Addis Ababa
ETHIOPIA
SOUTH SUDAN
Juba
SOMALIA
Mogadishu
UGANDA
Kampala
KENYA
Nairobi
RWANDA
Kigali
Bujumbura
BURUNDI
Dodoma
TANZANIA
Dar es Salaam
LEGEND
Level of food insecurity
None or minimal
Stressed
Crisis
Emergency
Catastrophe/Famine
Country border

Source 2 Source: Oxford University Press


Typical season
Drought 2010–11
Sep 2010
Oct
Nov
Dec
Jan 2011
Feb
Mar
Apr
May
Jun
Jul
Aug
Short rainy season
Long dry season
Main rainy season
Short dry season
Rains bring pasture regeneration and increased water availability and support crop development
Very poor livestock production
Typical lean season
Typical lean season shortages more severe
Main rains in Ethiopia, Somalia, Kenya, secondary rains in south-eastern Kenya
Rainfall less than 30% of the 1995–2010 average, high livestock mortality rates, ranging from 15%–60%
Main harvest in Somalia, minor harvests in south-eastern Kenya
Crop failure in marginal cropping areas likely, staple cereal prices exceed record levels

Source 3 This timeline shows the rainy season failure of 2010–11, compared to a typical season.

skill**drill**

Developing geographical questions

It is important that geographers ask lots of questions. These questions can be simple or complex, and can guide understanding of places, events, and the causes and effects that various factors have on an environment.

For example, in the case of an event such as a famine, a geographer may start the process of understanding the situation by asking a simple question such as, ‘How many people died in the famine?’ Often a simple question will look at the more quantitative aspects of a situation (i.e. facts that can be expressed in numbers).

Then, to investigate further and deepen their understanding, a geographer may ask a more complex question, such as, ‘Was there a change in climate that caused food crops to fail?’ Often, a complex question will look at the more qualitative aspects of a situation (i.e. things that can be expressed in words not numbers). The best complex questions can open up a whole new area to explore and result in an in-depth understanding of the situation.

The following steps will help you generate a range of simple and complex questions.

Step 1 Select an event that you would like to investigate.

Step 2 Construct some simple questions to guide your initial investigation. The key words ‘who’, ‘where’, ‘when’ and ‘what’ should help you get started.

Step 3 Investigate the questions you have listed and note down your answers.

Step 4 Expand your investigation by forming some more complex questions. Words such as ‘why’, ‘what caused’, ‘who interacts’ and ‘what impact’ will help you to construct these types of questions.

Step 5 You may also develop some of the questions from Step 2 into more complex ones. For example, you could develop ‘What?’ into ‘What will the effect of … have in the future?’ to allow for further discussion.

Apply the skill

Use Sources 1, 2 and 3 together with the information provided to complete the following tasks.

1 Develop a set of five simple questions about the famine in the Horn of Africa in 2011–12. Use your answers to list some main facts about the situation.

2 Now investigate the famine more deeply by constructing three complex questions that focus on its causes. You may want to develop a complex question that focuses on the political situation in the region and the effects this had on the countries that suffered.

3 Prepare a brief report explaining the famine based on your answers. Check that you have included causes as well as effects in your report to give a well-rounded viewpoint.

Extend your understanding

Conduct some further research and then complete the following tasks.

1 How did the ongoing conflict in southern Somalia contribute to the famine?

2 Research how organisations such as Caritas, UNICEF, AusAID, Mercy Corps, World Vision and Oxfam helped bring food security to this region during 2011 and 2012.

3 What means do you think can be adopted to establish long-term food security in a region that experiences famines?

3.3 Challenges to food production

As we have learnt, food security (the consistent access and availability of an adequately nutritious food supply) depends on a number of factors. In some places, these factors are in a state of flux, and food security is under constant threat.

There are six main threats to food security which are outlined here, and which will be explored in more depth in this section of the chapter. The main factors that come into play and put food security at risk are: water scarcity; climate change; threats from non-native plants, animals and insects; competition for land; the use of land for fuel instead of food; and armed conflict.

Challenges to food production

Water scarcity 	**Water scarcity** is the lack of access to enough safe water. The supply of clean, safe water is important not only for people to drink, but for the safe growing of crops for food. As the world's population continues to grow, water becomes an even more important resource, and its management becomes more crucial. Water is needed for people to drink, wash and cook with on a household level; however, massive amounts of water are also needed for agriculture, industry, manufacturing and leisure activities. This competition for water can lead to shortages, and when there is not adequate water, food security is put at risk. **Source 1** Drought is a major cuase of food insecurity. Prolonged periods of inadequate rainfall can cause soil erosion.
Climate change 	The term **climate change** refers to long-term changes in weather events and patterns worldwide. The effects of climate change include rising global temperatures and changes in levels of rainfall. Such changes impact on the environment and the sustainability of agricultural production. Places that are able to grow certain crops because of the reliable rainfall, for example, may find that increases or decreases in rainfall affect the viability of that crop. Climate change may also cause more frequent droughts or floods in some regions, both disastrous to crops. The effect on crop growing is just one example of the way climate change can directly impact on food security. **Source 2** The melting of glaciers and icebergs is a well-known example of climate change. Another effect to climate change is the threat to food security in many parts of the world.
Threats from non-native plants 	The introduction of non-native plants, animals or insects into an area can have devastating effects on the natural environment. This, in turn, can develop into a situation where food security is put at risk. Pests such as the Khapra beetle, which live and breed in stores of grain, can destroy up to 70 per cent of a store and make it inedible. A native of South Asia, the Khapra beetle is now one of the top invasive species globally. In countries where rice is a food staple, the damage caused by this beetle puts food security at risk. **Source 3** Swarms of locusts, which will eat any plant material in their path, are pest that can quickly destroy crops, resulting in food insecurity.

Challenges to food production

Competition for land

In many places around the world, agriculture is being threatened by competition for land. Food security may come under threat by people or corporations who want to use land for purposes other than growing food crops. Land that was once productive farmland is being converted into housing, mines, golf courses, shopping complexes and factories (see Source 3). This competition for land, partly to service and house growing populations, means that there is less land available to grow food.

Source 4 Increasing competition for land to use for purposes other than growing food poses a threat to food security in some regions of the world.

The use of land for fuel instead of food

One of the biggest emerging threats to food security in recent years has come from the growth in the amount of land being used to produce crops used to feed cars, not people. These crops are used in biofuels – fuels that are produced, or partly produced, by some types of plants. Researchers, trying to reduce carbon emission caused by traditional fuels, developed biofuels. This has meant that land previously used to grow food crops has been taken over in order to supply the produce for biofuel (see Source 4).

Source 5 The practice of using land to grow crops for fuel, not food, puts food security at risk for many people.

Armed conflict

Armed conflict is another complex and severe threat to food security. Armed conflicts have the potential to affect the food security of entire regions and may even result in famine. In cases of armed conflict, the food security of a population can be affected in various ways. Food may be stolen from the local people by armed forces, land used for growing food crops may be destroyed, or the young men – even children – who would normally tend fields may instead go off to fight. The effect of armed conflict on food security, and how to deal with it, is a major global concern to organisations such as the United Nations and UNICEF.

Source 6 Food security can be jeopardised in areas of the world experiencing armed conflict.

Check your learning 3.3

Remember and understand

1 Why is there growing competition for water and land resources?

2 Name some of the competing uses for land around the world.

Apply and analyse

3 The use of biofuels can help reduce the carbon emissions that cause climate change, but growing crops for fuel can also increase food insecurity.
  a In this instance, do you think it is more important to provide enough food for people or to help stop climate change?
  b How would you suggest balancing the potential risks of climate change against people's need for food?

3.4 Water scarcity

Agriculture uses about 70 per cent of all fresh water taken from rivers every year. From the rice terraces of China to the orchards of Australia's Murray–Darling Basin, river water is used to irrigate farms and feed billions of people around the world.

River systems and the water they capture, store and distribute are among the most threatened natural environments on Earth. The level of threat to the ongoing supply of fresh water available for agriculture varies from place to place, but an increasing demand for water is by far the most common threat to food security around the globe. In many places, population growth – particularly in cities – puts increased demand on nearby rivers and lakes. This increased demand and usage then threatens the water supplies that farmers rely on.

Economic factors

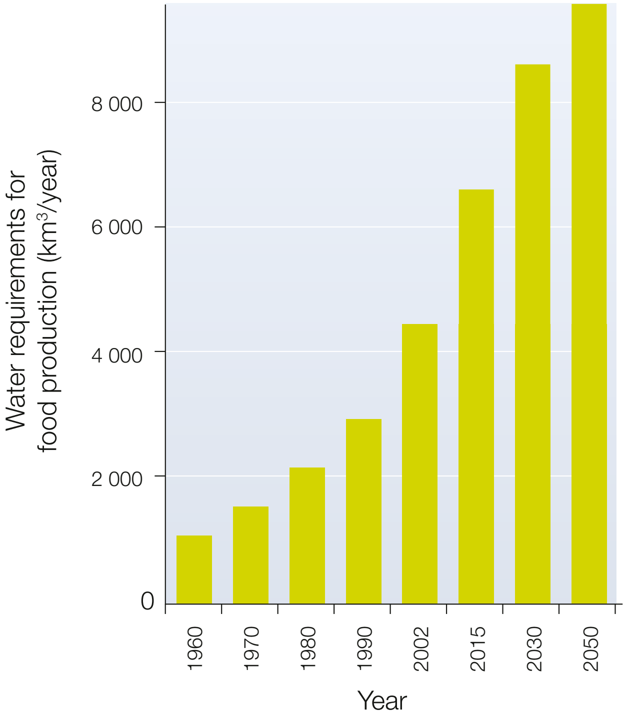
Greater prosperity and socioeconomic development also places greater demands on water supplies. Industrial development and an increase in the number of individual households means increased water consumption. At current usage rates, water needed for industry around the world is predicted to at least double by 2025.

Rapid economic growth and Westernisation in countries such as China and India are also affecting water usage. According to environmentalists and academics, water scarcity and quality are the most pressing environmental issues facing China today. Currently water is being used at an unsustainable rate. Changing tastes in places like China are also increasing the demand for certain foods, such as meat, which requires more water to produce than traditional rain-fed crops. This is putting an added strain on water resources.

Environmental factors

Environmental factors also affect the amounts of water used for growing food (see Source 2). Changing rainfall patterns and warmer temperatures as a result of climate change are seriously affecting water supply in some regions of the world. The rapid melting of glaciers in places such as South America and Central Asia is of particular concern.

Source 1 A farmer searches for water in the Mekong river basin.



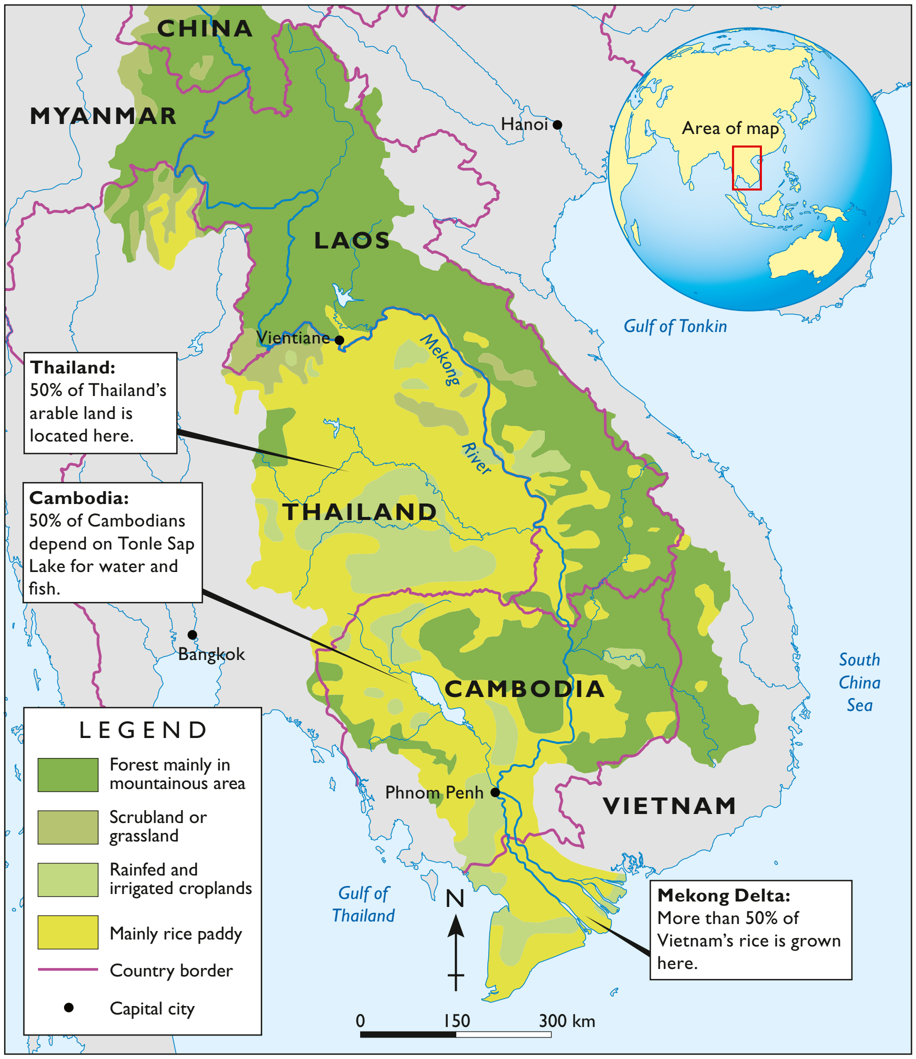
Source 2 The historic and projected changes in water consumption needed for agriculture, 1960–2050

Glaciers have historically acted like reservoirs. As the glaciers have slowly melted, water has flowed down the mountains into the rivers, providing water to millions of people. This water has been used to grow a significant amount of the food to meet the requirements of 2.5 billion people in Asia, and 53 million people in Peru, Bolivia and Ecuador. As the glaciers shrink, however, this water flow is declining. A lack of water to grow crucial crops is predicted to have a severe impact on food security for people in these regions.

Case study: the Mekong Basin

The Mekong River begins on the northern slopes of the Himalayas and crosses six countries before reaching the South China Sea. On its journey it is dammed for electricity and diverted for irrigation, providing water to meet the needs of more than 60 million people. Forty-eight million people rely directly on the Mekong River basin for their food supply (see Source 3).

THE MEKONG BASIN: LAND USE


CHINA
MYANMAR
Hanoi
Area of map
LAOS
Gulf of Tonkin
Vientiane
Mekong River
THAILAND
Bangkok
CAMBODIA
South China Sea
Phnom Penh
VIETNAM
Gulf of Thailand
N
0
150
300 km
LEGEND
Forest mainly in mountainous area
Scrubland or grassland
Rainfed and irrigated croplands
Mainly rice paddy
Country border
Capital city

Thailand: 50% of Thailand's arable land is located here.

Cambodia: 50% of Cambodians depend on Tonle Sap Lake for water and fish.

Mekong Delta: More than 50% of Vietnam's rice is grown here.

Source 3

Source: Oxford University Press

Check your learning 3.4

Remember and understand

1 List the ways in which the supply of river water for farming is threatened. Highlight those that apply to rivers in Australia.

2 Explain how water scarcity and food security are linked.

Apply and analyse

3 Use an atlas and Source 3 to describe the route taken by the Mekong River from its source to the mouth. Explain how changes near the source could bring about food insecurity for communities near to the mouth.

4 Estimate the area of rice paddy cultivation in the region shown in Source 3. Describe the spatial association between the river and the rice paddies.

5 Describe the changes in the amount of water used, and projected to be used for food production from 1960 to 2050.

Evaluate and create

6 The Mekong River crosses six countries. How might this cause problems and conflicts between countries who rely on it? In particular, how might downstream users such as the rice farmers of Vietnam be affected?

3.5 Climate change

Much debate surrounds the subject of climate change, but there is now considerable evidence and consensus that the main cause of **global warming** is the rising carbon dioxide levels in our atmosphere from burning **fossil fuels**. Gases produced by human activities and industrial pollution are being added to the atmosphere at such a rate that they are changing the Earth's climate. The most obvious change is a rise in global temperatures but there are other changes too. Some places are becoming wetter, while others are becoming drier. Glaciers and ice caps are melting, causing sea levels to rise. Extreme weather events such as droughts, floods and cyclones are becoming more serious and frequent. These and other changes are already impacting on food production, and climate scientists warn that these impacts will become more severe in the future depending on global temperature increases (see Source 1).

Changes in the atmosphere affect water and land that is used for growing crops. Droughts mean there is not enough water for successful crop growing, while a drastic increase in the amount of rain falling on a region means crops may be flooded and destroyed. These changes in climate pose a significant threat to food security.

Source 1 Climate change is projected to impact significantly on food, water and ecosystems.

Global temperature increase	Projected effect
0°–1°	• Small mountain glaciers disappearing, impacting on water supplies • Extensive bleaching and damage to coral reefs leading to widespread death of coral and attached species • Risk to some ecosystems • Increase in extreme weather events – increased damage from floods and storms
1°–2°	• Up to 30% of species at increasing risk of extinction • Failing crop yields in many areas, particularly developing regions • Cereal-growing productivity to decrease in some regions • Risk to some ecosystems increases
2°–4°	• Significant decrease in water availability in many areas, including the Mediterranean and southern Africa • Increasing level of extreme weather events – increased number of human deaths due to floods, heatwaves, droughts, etc. • Many ecosystems now at risk • About 30% of global coastal wetlands to be lost
4°+	• Very high risk of irreversible environmental damage • Very high risk of abrupt changes to global environments • Sea level rise threatens major cities • Falling crop yields in many developed regions • Significant number of extinct species around the globe • Increasing levels of malnutrition, diarrhoea and infectious disease

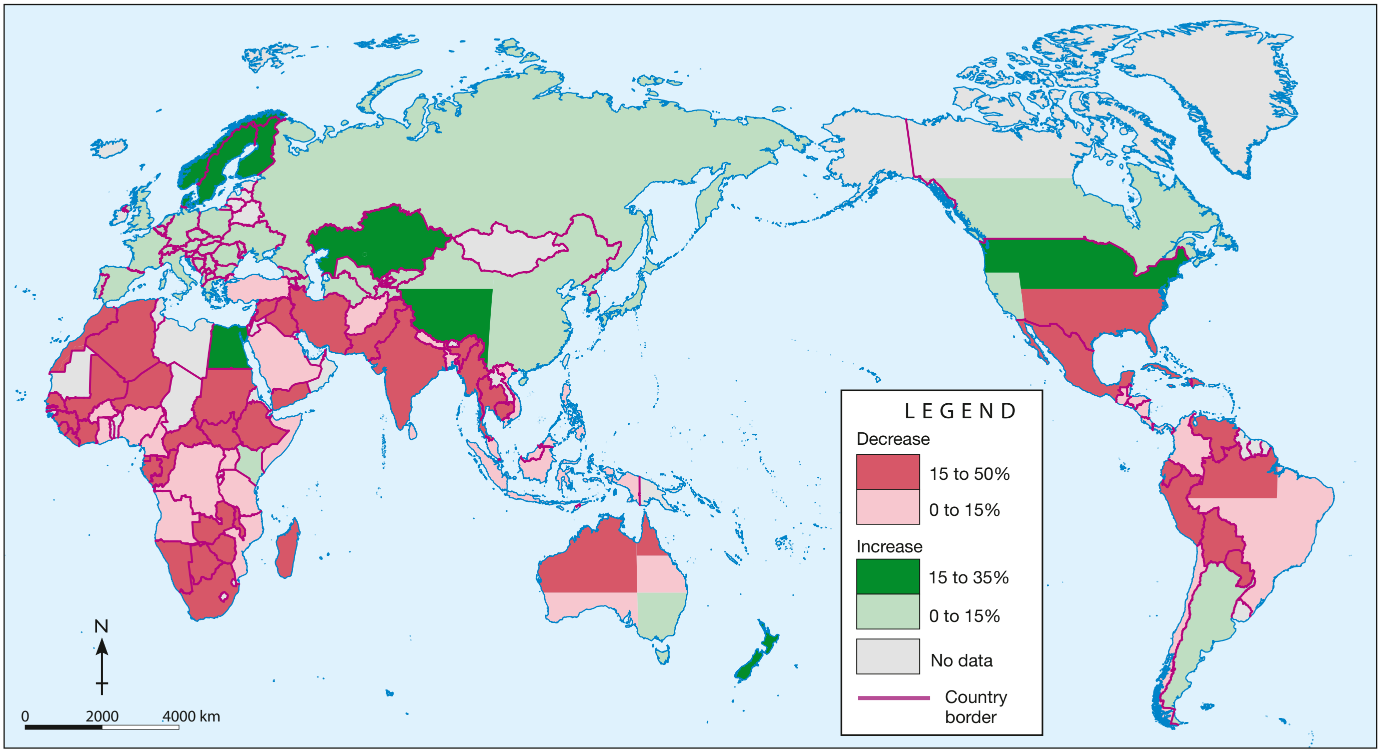
Impacts on Sub-Saharan Africa and Asia

The impacts of climate change on food production are likely to be greatest in Sub-Saharan Africa and Asia. Many farming areas in Africa are expected to become drier. As the soil dries, causing plants such as trees and shrubs to die, the possibility of Africa's deserts spreading into areas currently being farmed is expected to increase. Infestations from plants and animal pests such as locusts are also expected to become more severe, as are droughts.

Asia's river deltas, such as the Mekong, Ganges, Indus and Yangtze, are sometimes referred to as the world's rice bowl. Due to farming improvements introduced during the Green Revolution, these river deltas now help provide food security to over one billion people. This food security, however, is under threat from several effects of climate change. Changes in rainfall patterns are making it difficult for farmers to know when to plant their crops. Severe rainfall variability is damaging crops and affecting food security. Thailand, for

Source 2 This rice field sits on a low island near the mouth of the Ganges River in Bangladesh. A sea level rise of a few centimetres would cover the crop in salty water, destroying it.

WORLD: PREDICTED CHANGES IN FOOD PRODUCTION BY 2080



Source 3

Source: Oxford University Press

example, suffered a severe drought in 2010 that damaged crops across the country. A year later, devastating floods swept through Thailand leaving behind a $40 billion damage bill.

It is the impact of rising sea levels, however, that has the greatest potential to damage food security in these river delta regions. Rice is grown in the fertile soil of low-lying river deltas. As sea levels rise, ground and river water become saltier, killing rice crops and depositing more salt in the soil.

Predicted changes in food production

The effects of climate change on food production will vary across the world. Some regions may even be able to increase food production with the changes in climate. However, for most parts of the world, and most significantly, for the most populated parts of the world, climate change will cause a decrease in potential food production (see Source 3).

Check your learning 3.5

Remember and understand

1 Why are many rice paddies in river delta regions at risk from climate change?

2 Explain the link between human activities and climate change.

Apply and analyse

3 Examine Source 1 showing some predicted effects of climate change. Select five of the effects listed and describe how they may threaten food security.

4 Examine Source 3. Which regions of the world are predicted to lose between 15 per cent and 50 per cent of their food production by 2080?

5 Compare Source 3 with Source 3 on page 91 and complete the following tasks.

   a Which regions that currently have stable food security are predicted to experience significant change by 2080?

   b Which regions currently at risk of extreme food insecurity are predicted to lose more than 15 per cent of their food production by 2080?

Evaluate and create

6 Compare the predicted changes in food production for Australia and New Zealand. Which impact of climate change do you think will most affect their food security in the future? Give some reasons for your answer.

3.6 Threats from non-native plants, animals and insects

One of the greatest threats to natural ecosystems and to food security is the arrival or introduction of non-native plants, animals or insects into an area. Known as **invasive alien species** (**IAS**), they cause billions of dollars of crop loss and damage throughout the world every year. Vast sums of money are spent trying to control and contain these invaders.

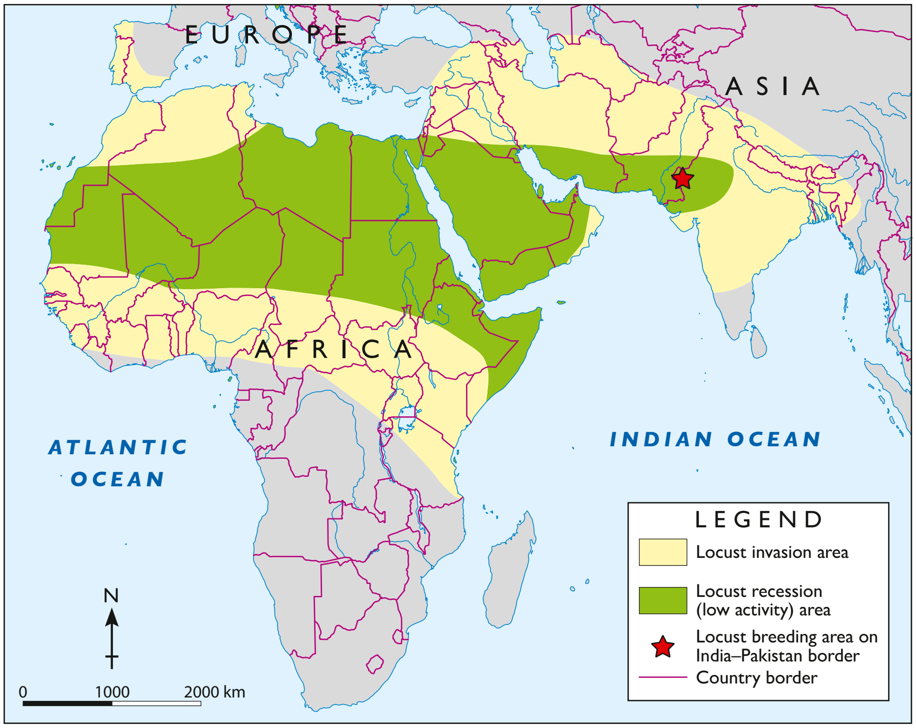
Virtually all farming communities are under threat from invasion. In Australia, for example, it is estimated that about 15 per cent of all plants growing throughout the country are weeds. Weeds affect food security as they compete with crops for water, sunlight and soil nutrients. The number of invading plant species in Australia is also growing by about 10 new species per year. These new species are spreading faster than they can be controlled.

Invading plants and animals are mainly spread through human activities. In some cases, the spread is accidental. The most successful invader in the world, for example, is the black rat. Native to north-east China and India, rats were carried around the world as stowaways on ships. Most modern invaders, however, now hitch rides on planes rather than ships. Seeds carried accidentally on shoes, or insects in clothing can now travel from place to place across the world in a matter of days, even hours.

In other cases, alien invaders are introduced to native environments deliberately. Humans have, at different times, purposely brought non-native species into an environment, usually to tackle an existing problem with another species. Unfortunately, in the past there has been a failure to predict the level of negative consequences that the introduction might have on the local ecosystem as a whole. The cane toad and Indian Myna bird were both introduced to Australia to control pests. They have, however, now caused massive destruction to the natural ecosystem, native species and the food chain.

Source 1 A swarm of locusts can devour a vast area of crops in a stunningly short period of time.

AFRICA AND SURROUNDS: LOCUST AREAS



Source 2 Source: Oxford University Press

Case study: desert locusts

Desert locusts are usually solitary insects causing no great harm to farmers' crops. When conditions are right for them, however, they become one of the world's most destructive pests, bringing widespread food insecurity to communities in Africa, Asia and the Middle East. Drought conditions in their usual recession area (the area where they normally withdraw and are not active) combined with good rains in their breeding area cause the locusts to form vast swarms that invade surrounding areas (see Source 1). A swarm may cover 1000 square kilometres, with up to 80 million locusts per square kilometre. Travelling up to 100 kilometres per day, they devour entire crops in minutes. One swarm in Ethiopia, for example, is believed to have consumed enough grain to feed a million people for a year.

Case study: the larger grain borer

Two of the most important food crops in Sub-Saharan Africa are maize (a type of corn) and cassava (a root plant). Subsistence farmers – those who grow only enough for their household needs – grow small fields of maize and cassava and pick and store them during harvest time, providing some food security throughout the year. However, their stored crops are under attack from an unwelcome invader: the larger grain borer.

Accidentally introduced into Tanzania from its native Central America in the late 1970s, the larger grain borer has now spread throughout West and East Africa. Feeding on the stored maize and cassava, it can quickly reduce stores to piles of dust unfit for human consumption. Farming families are then forced to try and buy food from other farmers. In many cases, however, all the stored crops in a region have been destroyed.

Source 3 Maize is the staple food of millions of people. An invasive alien species such as the larger grain borer can pose a very serious threat to the food security of people who rely on a maize crop for food every day.

Check your learning 3.6

Remember and understand

1. How do weeds impact on food security?
2. How are invasive alien species spread?

Apply and analyse

3. Examine Source 2. Describe the spread of desert locusts from recession areas into invasion areas. Use the names of regions, countries and compass directions in your description.
4. Why are desert locusts a threat to food security in some regions?

Evaluate and create

5. From its discovery in Tanzania in the late 1970s, the larger grain borer has spread throughout much of the African continent. Here is a list of countries where the larger grain borer has been found with the year of its detection:

   Kenya (1983); Togo, Benin and Burundi (1984); Guinea (1987); Ghana (1989); Burkina Faso (1991); Malawi and Nigeria (1992); Rwanda and Zambia (1993); Niger (1994); Namibia (1998); Mozambique (1999).

   a. Using the list of the countries above, as well as the years of detection, map the spread of the larger grain borer from its discovery in Tanzania in the late 1970s on an outline map of Africa. Use labelled arrows to show the progression of the spread.
   b. Describe the movement of the borer as shown on your map.
   c. Which countries do you believe are most at risk from the future spread of this invader? Why do you think this would be the case?

3.7 Competition for land

In addition to environmental factors, food security can also be threatened by individuals or corporations taking over productive land and using it for purposes other than growing food. In many places around the world, land that was once farmland is being converted for housing, mines, golf courses, factories and other uses. This competition for land is being driven partly by the increase in the world's population and partly by the desire to make more money from the land.

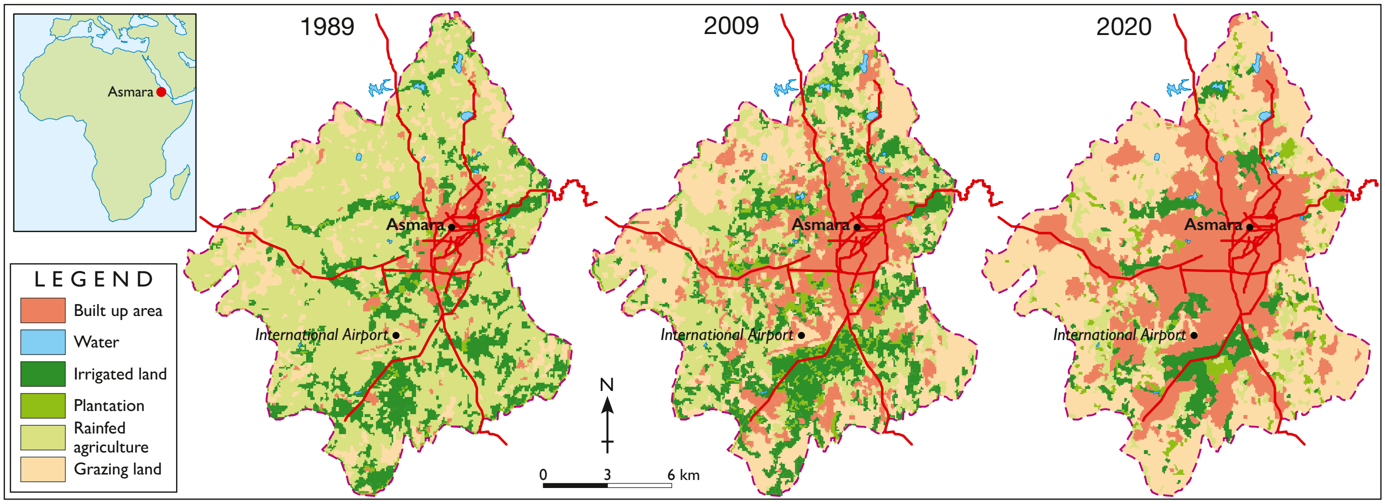
Source 1 New suburbs sprawl into existing farmland north of Asmara, the capital of Eritrea, in Africa.

Land for housing

The development of rural areas for housing is one example of competition for land use. **Urban** areas cover only about 2 per cent of the world's total land area. They are often built, however, on the best land – flat, fertile and well watered. Farming areas on the edges of cities provide food to the city dwellers. As cities grow in population, however, they also grow in size, and farmland and rural spaces are taken over and developed into new suburbs for the growing population. The spread of a city outwards is known as **urban sprawl**. In this process, farmland is taken over for housing, and farmers are pushed further out onto land that may not be as suitable for growing crops. Their ability to produce food may fall, putting at risk the food security of the people in the city.

The city of Asmara in Eritrea, for example, has tripled in size in the last 20 years and now sprawls across land that was previously prime farmland. Source 2 maps the rapid growth of Asmara. This growth is expected to continue at its current rate, and may even accelerate in the next few decades, absorbing more productive farmland. This same process has been experienced in many places around the world, including Australia, where urban sprawl has seen productive farmland converted to suburban living spaces.

ASMARA: URBAN GROWTH 1989–2020



Source 2

Source: Oxford University Press

Land for tourism and recreation

In some places, productive farmland is also being converted into tourism and recreation facilities. Many developing countries, for example, recognise that attracting tourists provides them with a reliable source of income. These tourists, most of them from developed countries such as Australia and the USA, are drawn to these countries for a range of factors including climate, stunning scenery and unique cultures. But tourists often also want a high standard of accommodation and recreation facilities like hotels, pools and golf courses (see Source 3).

A study of the impact of golf course development in Thailand found that 250 courses in the country together consume about 200 square kilometres of land. About three-quarters of these courses were built on existing farmland, the rest on land that was previously forested. This area represents a loss of about 89 000 tonnes of rice every year. Furthermore, golf courses put great pressure on the freshwater resources of the local area. Each Thai golf course consumes the same amount of water as 60 000 Thai villagers would.

This trend is not confined to Thailand. In other Asian countries such as Indonesia, Cambodia and Vietnam, as well as in island nations throughout the Caribbean, productive farmland and scarce freshwater resources are being consumed by golf courses and other recreation facilities.

Source 3 A rice field has been converted into a golf course to attract tourists, an increasingly common use of agricultural land in many places in Asia. This poses a significant threat to food security – not only is the land for crop growth taken away but golf courses consume massive amounts of water.

Check your learning 3.7

Remember and understand

1 What is urban sprawl and why is it a threat to food security?

2 How does the growth in global tourism impact on food security?

Apply and analyse

3 Use Source 2 to describe the growth of Asmara from 1989 to 2009. Which type of farming was most affected by this growth? What is predicted to happen by 2020?

4 If golf courses threaten food security, why do many countries around the world build them on productive farmland? Explain the underlying causes of this problem.

5 The golf course shown in Source 3 has caused the loss of productive farmland and created other problems. It has also brought some benefits. Brainstorm the potential costs and benefits of this golf course to the local region and community.

Evaluate and create

6 Research the growth of a large Australian city. Find out if its development has resulted in urban sprawl and the loss of productive farmland. If so, explain what the impacts of this have been for food production in the region.

3.8 The use of land for fuel instead of food

Brazil is one country where the use of land for growing fuel rather than food has increased dramatically. Despite offering many advantages, this change has the potential to put future food security in Brazil at risk.

Case study: Brazil's biofuel

Biofuels are fuels made from organic matter rather than fossil matter. They are often made from biomass (i.e. plant materials high in sugar, starch or oil) such as sugar cane, corn, soya beans or sunflowers.

Brazil has gradually developed a booming biofuel industry. Biofuels such as ethanol and biodiesel are an example of how countries can develop 'home-grown' renewable energy sectors. The establishment of a biofuel industry has been part of wider long-term initiatives to change the way Brazilians produce and use energy, including adopting integrated food–energy systems (IFES). IFES combine the production of food and energy into one system. Other measures include:

- the introduction of new 'flex-fuel' vehicles which run on any blend of petrol and ethanol
- new land zoning laws that identify suitable areas for biofuel production (avoiding using land with high biodiversity, such as rainforests)
- efficiency improvements to increase the productivity of biofuels
- social and environmental safeguards to address any concerns.

Around 15 per cent of Brazil's total domestic energy supply now comes from biofuels made from sugar cane.

skill**drill**

Analysing complex maps

Complex maps contain more than one set of information. Geographers use complex maps to analyse different features, reveal patterns and explain links between features in a given area. You can analyse a complex map by following these steps.

Step 1 Look carefully at the map and read its title to make sure you understand what is being shown.

Step 2 Examine the map's legend. Complex maps can have more than one part to a legend, and these parts will be represented on the map in different ways. For example, in Source 1 areas of colour are used to show the location of soya bean and sugar cane crops. Different coloured symbols are also used, to show biodiesel and ethanol plants.

Step 3 Train your eyes to look for one set of information at a time. For example, look at solid blocks of colour on the map and work out what they tell you.

Step 4 Look for concentrations of the same symbol in areas to see if patterns exist.

Step 5 Note any patterns you can find on the map between different features and locations.

Step 6 Describe the degree to which patterns are connected.

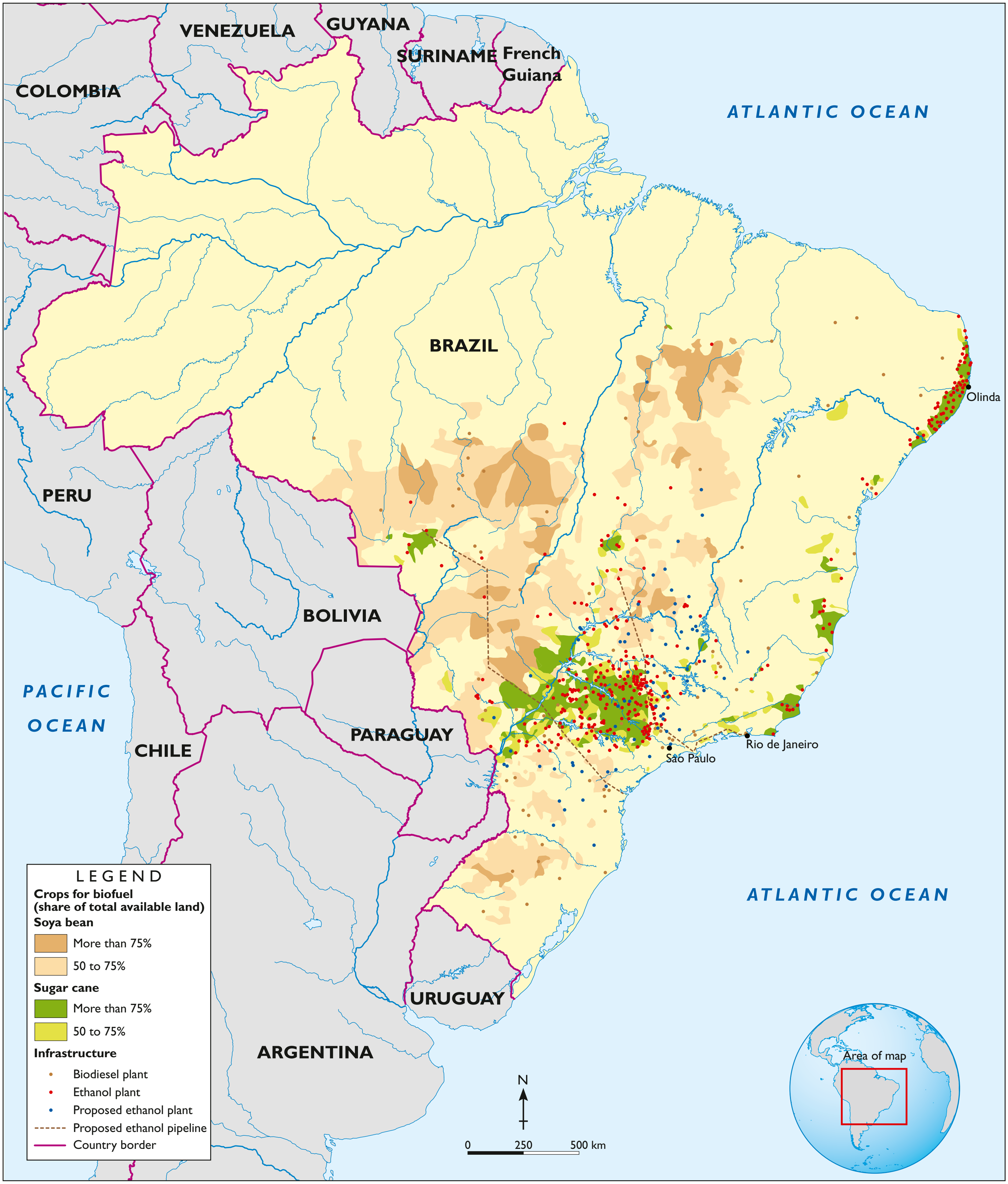
Step 7 Try to suggest reasons for the connection between the two patterns.

Apply the skill

Look at the map of South America (Source 1) showing biofuel infrastructure.

1. Find the symbol for ethanol and biodiesel plants in the legend then locate these on the map. Describe the concentration of these.
2. What relationship is there between the concentration of ethanol plants and the location of sugar cane crops?
3. What does the location of the ethanol pipelines tell you about the production and consumption of biofuels?

BRAZIL: BIOFUEL INFRASTRUCTURE


VENEZUELA
GUYANA
SURINAME
French Guiana
COLOMBIA
ATLANTIC OCEAN
BRAZIL
Olinda
PERU
BOLIVIA
PACIFIC OCEAN
PARAGUAY
CHILE
São Paulo
Rio de Janeiro
ATLANTIC OCEAN
URUGUAY
ARGENTINA
N
0
250
500 km
Area of map
LEGEND
Crops for biofuel (share of total available land)
Soya bean
More than 75%
50 to 75%
Sugar cane
More than 75%
50 to 75%
Infrastructure
Biodiesel plant
Ethanol plant
Proposed ethanol plant
Proposed ethanol pipeline
Country border

Source 1

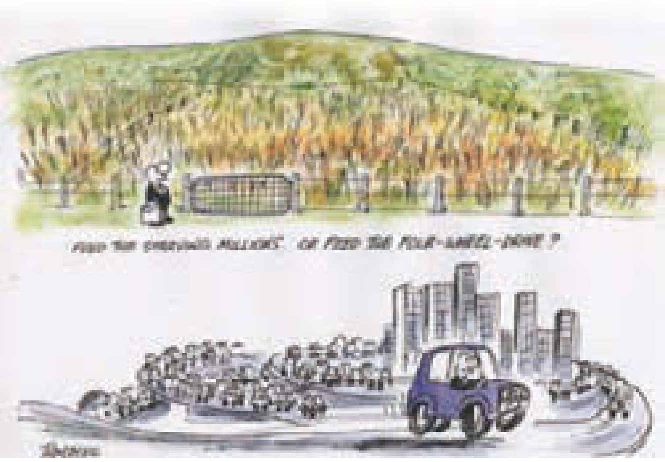
Source: Oxford University Press

Biofuels as a threat to food security

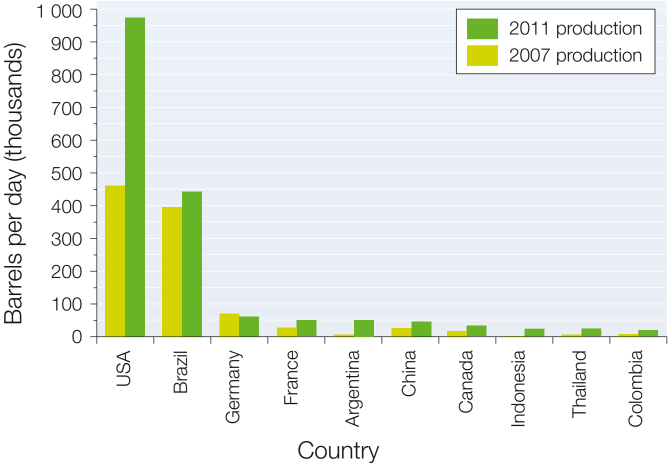
Although waste products of food crops such as corn and sugar cane can be used to provide some of the **raw material** for the production of biofuels, greater production of biofuel needs bigger crops. In some places, fuel crops are replacing food crops and this has raised concerns about food security in these countries.

While the amount of biofuel produced and used has grown rapidly in recent years, it still provides only 3 per cent of the total energy used to power vehicles worldwide. Despite this, biofuel production threatens the food security of many communities, particularly in South American countries such as Brazil, Argentina and Colombia, that are boosting their biofuel production.

Biofuel production poses a threat to food security in two main ways. Firstly, marginal farming land (land that is situated on edges of **arable** land) is the land most likely to be converted for growing biofuel crops. This is often the land that poorer farmers use to grow the food needed to feed their families. Secondly, growing crops for fuel rather than food pushes up the price of food, making it less accessible. As people on lower incomes spend a much greater proportion of their income on food than wealthy people do, it is the poor who suffer most when food prices increase.


FEED THE STARVING MILLIONS' OR FEED THE FOUR-WHEEL-DRIVE ?

Source 2 Political cartoonists often rely on simple images to convey a complex message – this cartoon comments on the competition between using land for food and using land for fuel.



Source 3 The top 10 biofuel producers in the world, 2007 and 2011

Check your learning 3.8

Remember and understand

1 What are biofuels? What are they produced from?

Apply and analyse

2 Examine Source 2.
  a What point is the cartoonist making about biofuels?
  b How effective is this cartoon in communicating this point?

3 Examine Source 1.
  a Compare Source 1 with Source 4 on page 43 (World biomes). Which biomes are most threatened by the expansion of Brazil's biofuels industry?
  b Some new ethanol plants are planned for construction across Brazil (shown as 'Proposed ethanol plant'). Describe the distribution of these new plants. How might the construction of these new plants lead to land use changes in the near future?

4 Who benefits from the growth in biofuel production? Who loses?

Evaluate and create

5 Use the data in Source 3 to construct a proportional circles map of the world's major biofuel producers in 2011.

6 One type of plant being used for biofuel production is jatropha. Jatropha is a flowering plant whose seeds are high in oil. In India, there are more than 1 million hectares of jatropha plantations. Research this plant and list the advantages and disadvantages of using it as a biofuel to replace fossil fuels. When finished, state your opinion on this use of farming land in India.

3.9 Armed conflict

Armed conflict – war between different countries, or civil war between groups within a single country – also has the potential to affect the food security of millions of people. It can result in widespread food shortages, and even long-lasting famines. While armed conflict results in deaths from battle, in some conflicts many people also die from a lack of access to food. Food insecurity caused by an armed conflict can kill more people than are killed by the fighting itself. Most at risk are people in developing countries, where many people rely on their own small farms to provide their family's food.

Several countries in Africa have experienced the devastating effects that armed conflict can have on the food security of the population. In an area where food security is already a serious concern – currently 75 per cent of the continent's countries are considered at high or extreme risk of food insecurity – the added turmoil of armed conflict brings an extra threat to a situation that is already critical. Many African countries, including Somalia, have endured decades of armed conflict and the resulting decrease in food security.

International aid

While international aid agencies such as the Red Cross and United Nations work hard to address the lack of food security in these war-torn areas, the environment can be very dangerous. In Somalia alone, 14 employees of the United Nations World Food Program were killed while distributing aid between 2008 and 2011 (see Source 2). Corruption, theft and a lack of law enforcement all contributed to the terrible situation.

Transporting food and farming supplies by road in these countries is risky, with aid often being seized by fighters for their own use. In Somalia, sacks of grain, peanut butter and other foodstuffs meant for starving Somali people were often stolen. Some families receiving aid were even forced to give it back after journalists taking photos of them with the food had left. With local food supply markets disrupted, food aid that has been stolen is often sold on in markets, taking relief efforts away from the starving and needy (see Source 2).

Distributing food aid is also often complicated by difficulties in reaching war-torn areas. Groups in remote areas can be difficult to locate and delivery of food aid to these places may be slow.

In such situations, hunger can be used as a weapon. The government can deliberately keep food away from opposition fighters and the local people who support them.

Source 1 Western armed forces distributing food aid in Somalia

Source 2 Food supply is affected as local markets are targeted. In Mogadishu, the capital of Somalia, relief aid was commonly looted at the distribution points and then sold at the markets.

Impact on local farmers

During times of war, such as those experienced by Somalia, food shortages are common. There are many reasons for this. Some food shortages are caused by the disruption of food markets and food aid. Land mines are planted, causing lasting danger (see Source 6). Some are caused by the fact that apart from the conflict that is happening, there are ongoing harsh climate conditions to deal with. The effects of war combined with climate can go on for years (see Source 7).

Crops cannot be planted, weeded or harvested. Farmers cannot plant new crops, which extends food insecurity even when the conflict is finished (see Source 7). Irrigation systems are destroyed and other water resources, such as wells, are sometimes poisoned as an act of war.

Animals are killed and taken for food by armies and rebel fighters. As well as a food supply, farmers lose manure for their crops as well as animal power to work their fields. Crop stores are often raided by rebel fighters as well.

Young men are often forced to fight. This seriously affects the agricultural output by reducing the available hands to work on farms. The amount of food and income for the family is diminished.

Farms may also be completely destroyed by the armed forces. Native scrub is burnt, and wild sources of food, such as wild fruits and honey, are destroyed. Many farmers abandon their farms.

In the Democratic Republic of the Congo in Africa, at least 400 000 people were displaced from their fields during the harvest period. This affected not only their short-term food security, but their long-term food security as well.

Particularly for countries that already experience other threats to their food security, such as weathering the effects of climate change or battling plagues of locusts, the effects of an armed conflict on their food security can result in life-or-death situations.

Source 3 Somali children waiting in line for food aid

WATER DISTRIBUTION

Source 4 In war-torn areas, water is a precious resource. These women wait at a water distribution area for their empty containers to be filled.

Source 5 Amnesty International reported that in Somalia, children as young as eight years old were recruited to take up weapons and fight in the conflict.

Source 7 Food security can be threatened for years, as the land bears the ravages of war.

Source 6 Due to landmines, land previously used to grow food becomes inaccessible for years. Harvests are destroyed and fields cannot be cultivated.

Check your learning 3.9

Remember and understand

1 Why is there often a shortage of farm labour during armed conflicts?

2 How can hunger be used as a weapon during times of war?

Apply and analyse

3 Why are subsistence farmers – farmers who grow just enough to feed their own family – most at risk of food insecurity during armed conflict?

4 Describe three ways in which food security for local people would improve if peace were reached in an area that had been experiencing armed conflict.

Evaluate and create

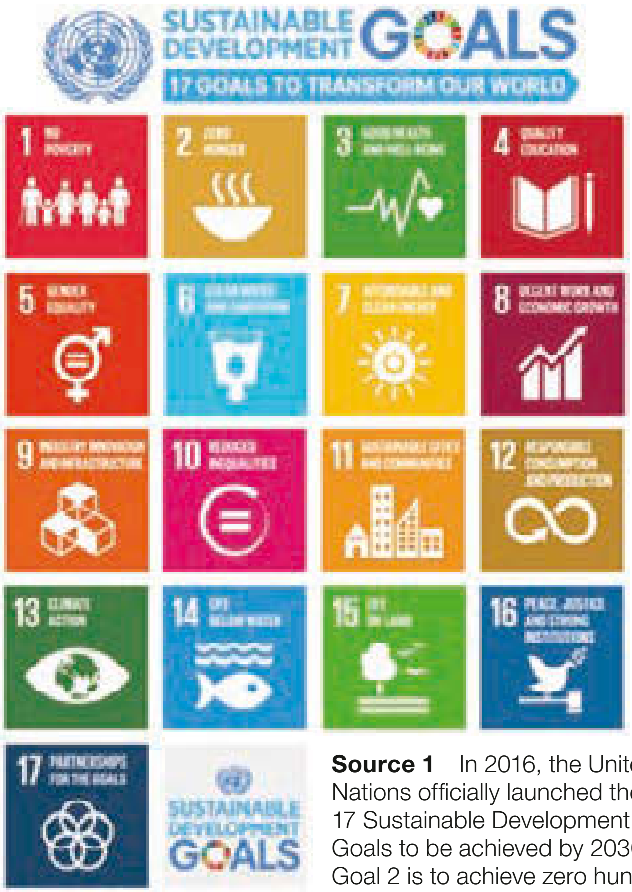
5 List the effects of armed conflict mentioned here. Rank them in order from the one that you think will have the most severe lasting impact on food security to the one you think will have the least serious lasting impact. Explain the reasons for ranking them in the order you chose.

6 How would the conflict in Somalia impact on the food security of people in other areas of the country or in neighbouring countries? Discuss this with a partner and then with your class.

3B rich task

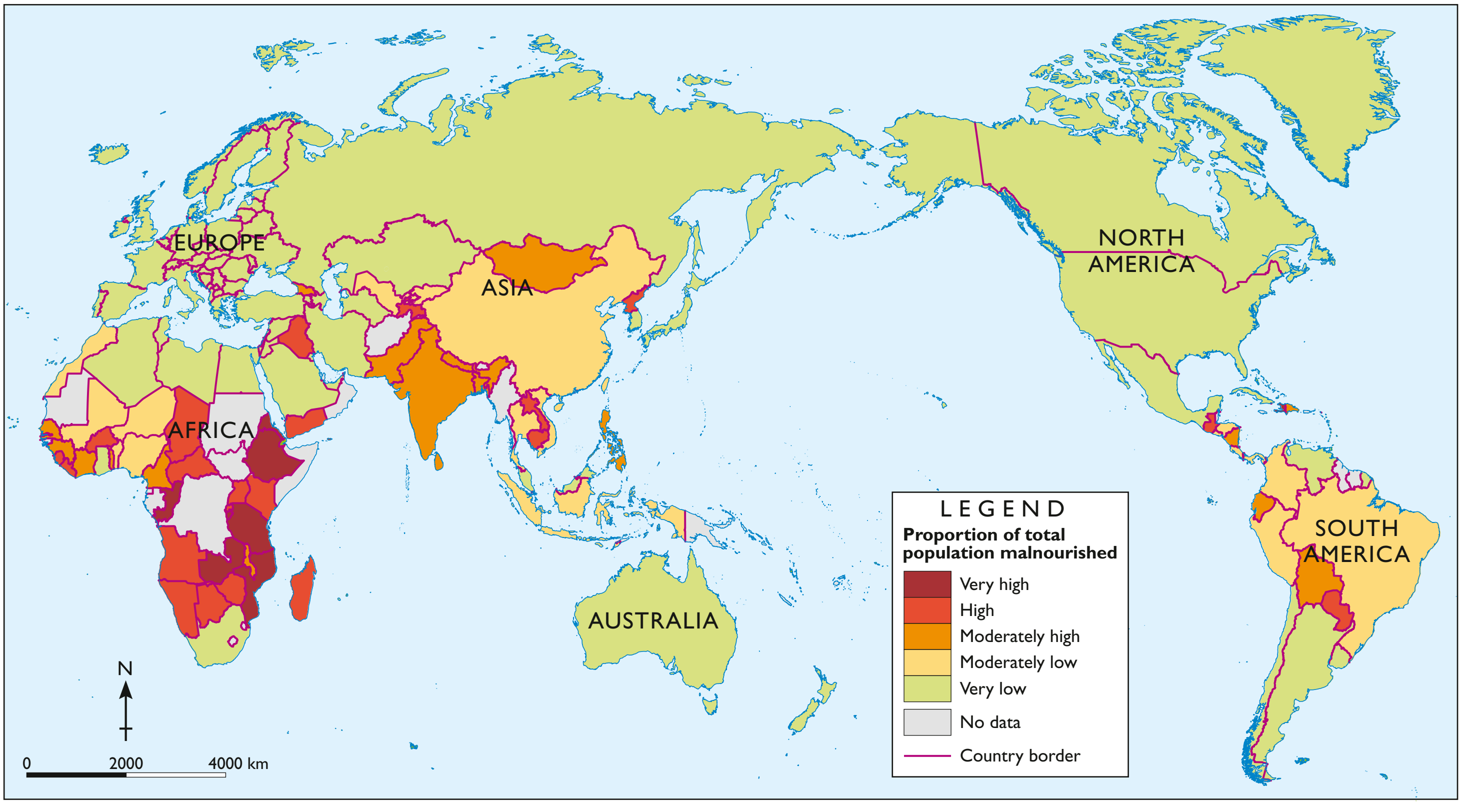
Zero hunger by 2030?

At a meeting of the United Nations in 2000, 189 member countries agreed on a set of goals designed to improve the living conditions of people in developing countries. Eight goals, known as the Millennium Development Goals (MDGs), were developed. One of these goals was to halve the proportion of people suffering from hunger by 2015. This goal was almost achieved, but there is still a lot of work to be done. On 1 January 2016, the UN launched a new Agenda to replace the MDGs. It calls on member countries to begin efforts to achieve 17 Sustainable Development Goals (SDGs) by 2030. One goal is to 'End hunger, achieve food security and improved nutrition and promote sustainable agriculture'.


SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

Source 1 In 2016, the United Nations officially launched the 17 Sustainable Development Goals to be achieved by 2030. Goal 2 is to achieve zero hunger.

WORLD: HUNGER LEVELS 2016


EUROPE
ASIA
AFRICA
AUSTRALIA
NORTH AMERICA
SOUTH AMERICA
N
0
2000
4000 km
LEGEND
Proportion of total population malnourished
Very high
High
Moderately high
Moderately low
Very low
No data
Country border

Source 2

Source: wfp.org

skill**drill**

Presenting an oral report to an audience

Geographers often present their findings to an audience by giving an oral presentation. You may find giving an oral presentation a little scary at first, but if you follow these steps you will be able to confidently deliver a successful report.

Step 1 Decide on a topic that will interest both you and your audience. Consider your audience and think about what they already know about the topic. What would you like them to understand by listening to your presentation?

Step 2 Research your topic. Geographers start with inquiry questions and then seek to answer them. Collect information from a wide variety of sources and keep a bibliography of these sources.

Step 3 Organise your findings into a draft report. It should have a clear introduction and conclusion. In your introduction it is often a good idea to use something to 'hook' your audience. It may be a question, a personal story or a challenging image. After your introduction, develop your report in a series of clearly defined sections (like paragraphs in a written report). Your conclusion usually summarises your key points. If your report is going to be assessed, make sure you have fulfilled the criteria for assessment.

Step 4 Support your report with clear visual material. This may be a set of graphs, maps or images. Do not just read your report to your audience.

Step 5 Practise your presentation. Make sure that you do not exceed the time limit and that you know your information well enough to avoid having to read it. It may be a good idea to have some memory cards with key words or ideas written on them.

Source 3 Try to find relevant images and visual materials (such as maps and graphs) to add variety and interest to your oral report.

Step 6 Deliver your presentation. Make sure that you speak clearly and vary pitch and tone. Stand up straight, keep your hands out of your pockets and don't lean on a desk. Take a few deep breaths to calm yourself and then pretend that you are speaking to only one person.

Step 7 Invite your audience to ask questions and do your best to answer them. If you are unsure of an answer don't make something up, just do your best.

Apply the skill

1 Prepare and deliver an oral report on an aspect of the Millennium Development Goal target to halve hunger by 2015. Your report must be supported by visual material and include responses to questions asked by the audience. Here are some possible topics to choose from, or you may like to develop your own.
  - There will always be hungry people in the world.
  - It is possible to halve hunger in some places but not others.
  - The solution to halving hunger is to …
  - If we address the causes of poverty we will meet the goal of halving hunger.
  - The proportion of hungry people in the world is more likely to rise than to fall.

Extend your understanding

Visit www.un.org/millenniumgoals/ to complete the following questions.

1 According to the UN, the Millennium Development Goal of halving hunger in developing nations was almost achieved. What were the rates of hunger in 1990 compared to 2015?

2 In 2015, how many people globally are estimated to be undernourished? How many of these people are children?

Gather some more information about the Sustainable Development Goal to achieve zero hunger by 2030. How does the UN plan to achieve this goal? Do you think they will be successful? Answer in a paragraph of 200 words.

3.10 Food security into the future

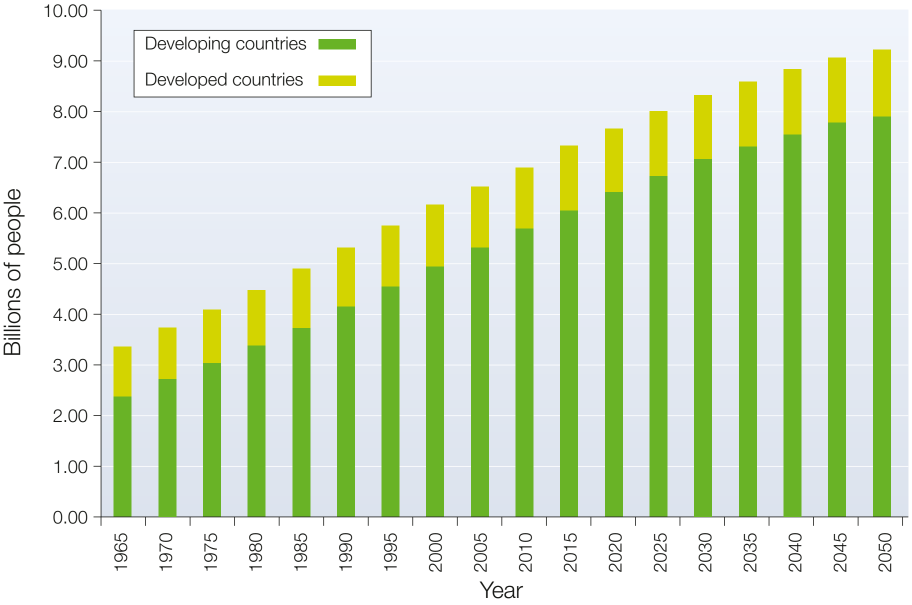
The world's population increases by about 200 000 people per day. At this rate, food will need to be grown to feed an extra 2.5 billion people by 2050. Virtually all of this population growth will occur in developing countries (see Source 2) where much of the population already struggles to meet their daily food requirements. Asia's population will increase by more than one billion by 2050 and Africa's population is projected to increase by 1.3 billion. Food experts estimate that global food production will need to increase by about 70 per cent by 2050 to meet the food requirements of the growing population.

Source 1 Will the world's growing population mean there will be less food security in the future?

Achieving food security

There are two schools of thought regarding the impacts of population growth on food security:

1. Some researchers believe that the world's population is growing faster than the world's farmers are able to feed it. The result will be widespread food insecurity, starvation and famine. Those who support this scenario point to the degradation of existing agricultural resources such as fresh water and soil. They also point out that most of the population growth is occurring in areas already at risk of food insecurity, such as parts of Africa.
2. Other researchers are more optimistic. They point out that food production over the last few centuries has largely kept pace with (and even exceeded) population growth. This has been largely due to the use of new technologies, referred to as **the Green Revolution** (see Source 3). They also focus on the slight slowing of the world's population growth rate in the last few years and the ability of humans to adapt to changing situations through research and innovation. Many believe that new developments in **genetic modification** of plants, for example, hold the key to increasing farming productivity and crop yields in the future.



Source 2 Population growth in developing and developed countries, 1965–2050

keyconcept: Environment

The Green Revolution

The Green Revolution refers to sweeping and widespread changes that occurred in farming regions across the world over the period 1950 to 1979. Beginning in Mexico and spreading through North America and much of Asia, these changes brought food security to hundreds of millions of people. The key changes were:

- the development and planting of new and improved varieties of grains, including wheat and rice, that produced much higher yields
- the widespread use of fertilisers and pesticides to increase farm productivity
- the adoption of mechanical vehicles and systems, such as tractors, pumps, sprays and irrigation systems.

As these and other related changes swept through countries such as India and China, many farming practices changed from small, **subsistence farms** to larger, more efficient farms. Although the Green Revolution has its critics, it is important to note that many of the African countries most at risk of food insecurity have yet to adopt many aspects of the revolution.

For more information on the key concept of environment refer to page 8 of 'The geography toolkit'.

Source 3 Farm workers in the Punjab region of India use a tractor to pull a load of grain. Part of the Green Revolution in India has been the introduction of high-yielding seed varieties, such as wheat, to encourage self-sufficient farming.

Check your learning 3.10

Remember and understand

1 What was the Green Revolution? What were the key changes it introduced?

2 How could the Green Revolution help to increase food security in Africa?

3 By what number is the world's population increasing each day?

4 By the year 2050, by how much do food experts estimate food production will need to increase to feed the world's population?

Apply and analyse

5 Examine Source 2 and answer these questions.
  a What evidence is there that the most population growth is occurring in developing countries?
  b Why is this important when considering global food security in the future?

6 List the arguments for and against the theory that there will be increasing food insecurity due to population growth. Which arguments and evidence do you believe have the most solid basis? Give some reasons for your response.

Evaluate and create

7 While there are many supporters of the Green Revolution, there are also many critics. As a class, brainstorm what these criticisms might be. Use this brainstorming session to develop some inquiry questions and use these to research this issue further.

8 Conduct research on the Internet into the genetic modification of plants.
  a In your own words, explain what is meant by genetic modification.
  b Outline three main arguments in favour of genetic modification of foods.
  c Outline three main arguments against the use of genetically modified foods.

3.11 Looking for answers

Over the course of human history, the world has seen dramatic and far-reaching changes. Humans have adapted to changes in the natural environment as well as building and changing the environment themselves. People have changed from being hunters and gatherers living in small communities to living as farmers and city dwellers. We have also improved our way of life through a series of remarkable revolutions: the **Agricultural Revolution**, the **Industrial Revolution** and the Green Revolution. These revolutions have allowed our populations to grow at an astonishing rate. In the rush to provide enough food and other raw materials to support our way of life, however, we are in danger of causing permanent damage to the very systems that support us – the soil, water and climate.

There are solutions, however, and some of them can be found in unusual places. Some solutions are based on developments at the forefront of technology, such as manipulating the genes of living organisms. Others come from the distant past; techniques used by Indigenous people who worked more closely with the natural systems of the Earth.

Looking after the soil

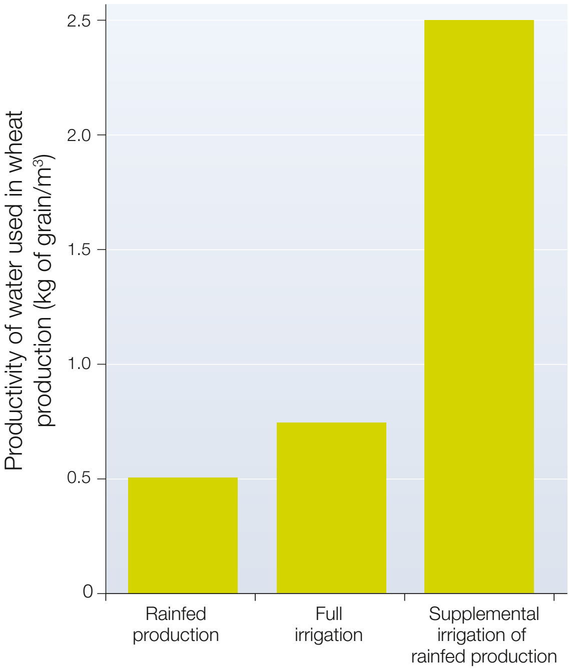
Soil is perhaps the farmer's most important resource. Many farming practices, however, such as ploughing, fertilising, clearing natural vegetation, irrigating and draining have degraded soil to such an extent that the soil can no longer support the same growth of crops as it did in the past. Many farmers are now changing their techniques to minimise their impact on the soil structure and nutrients by reducing ploughing, adding protective layers of organic material (mulch) and growing plants that help return nutrients to the soil.

Water management

Modern techniques of measuring soil moisture and delivering water to plants and animals are helping to reduce poor water management techniques and improve results in yields. Measuring distribution of water not only conserves the resource, but avoids over-watering, which can lead to salty soils. Storing rainwater in dams and adding it to crops during critical growing times,

Source 1 Maize crops planted beneath acacia trees in Africa are three times more productive than others nearby as the shade reduces evaporation and the falling leaves provide a natural fertiliser and mulch.

Source 2 These Cambodian schoolgirls are learning how some insects can be used to control pest species in their rice crops.



Source 3 Productivity of wheat production under various irrigation techniques, including supplemental irrigation

for example, can triple the amount of wheat grown compared to irrigation systems that water the crops all year round (see Source 3).

Pest control

The Green Revolution promoted the use of pesticides such as chemical sprays that helped to increase the amount of food grown in many places. Some of the side effects of using these pesticides, however – such as build-up of chemicals in the soil, loss of **biodiversity** and an immunity of some pests to the chemicals – have damaged some of the natural processes on which farmers depend. A range of techniques are now being developed and put into place around the world to reduce reliance on pesticides. Using natural pest controls such as ladybirds to reduce numbers of aphids on crops, for example, has been highly successful in many places (see Source 2).

Check your learning 3.11

Remember and understand

1 What are the advantages of growing crops in fields where trees are present? What might be some disadvantages?

2 List the ways in which using chemical pesticides may be harmful to the environment.

Apply and analyse

3 In Australia, adding mulch to the soil is a common practice for gardeners and farmers alike. What is mulch and how does it help look after soil and water?

4 Using Source 3, describe the advantages of adding water to wheat crops at the right time of the year.

Evaluate and create

5 Find an example of an animal species that has been successfully introduced to control another species.

6 Cane toads were brought to Australia to control pests but now cause more problems than the pests they were supposed to control. Research the introduction and spread of the cane toad. What lessons can be learnt from these experiences?

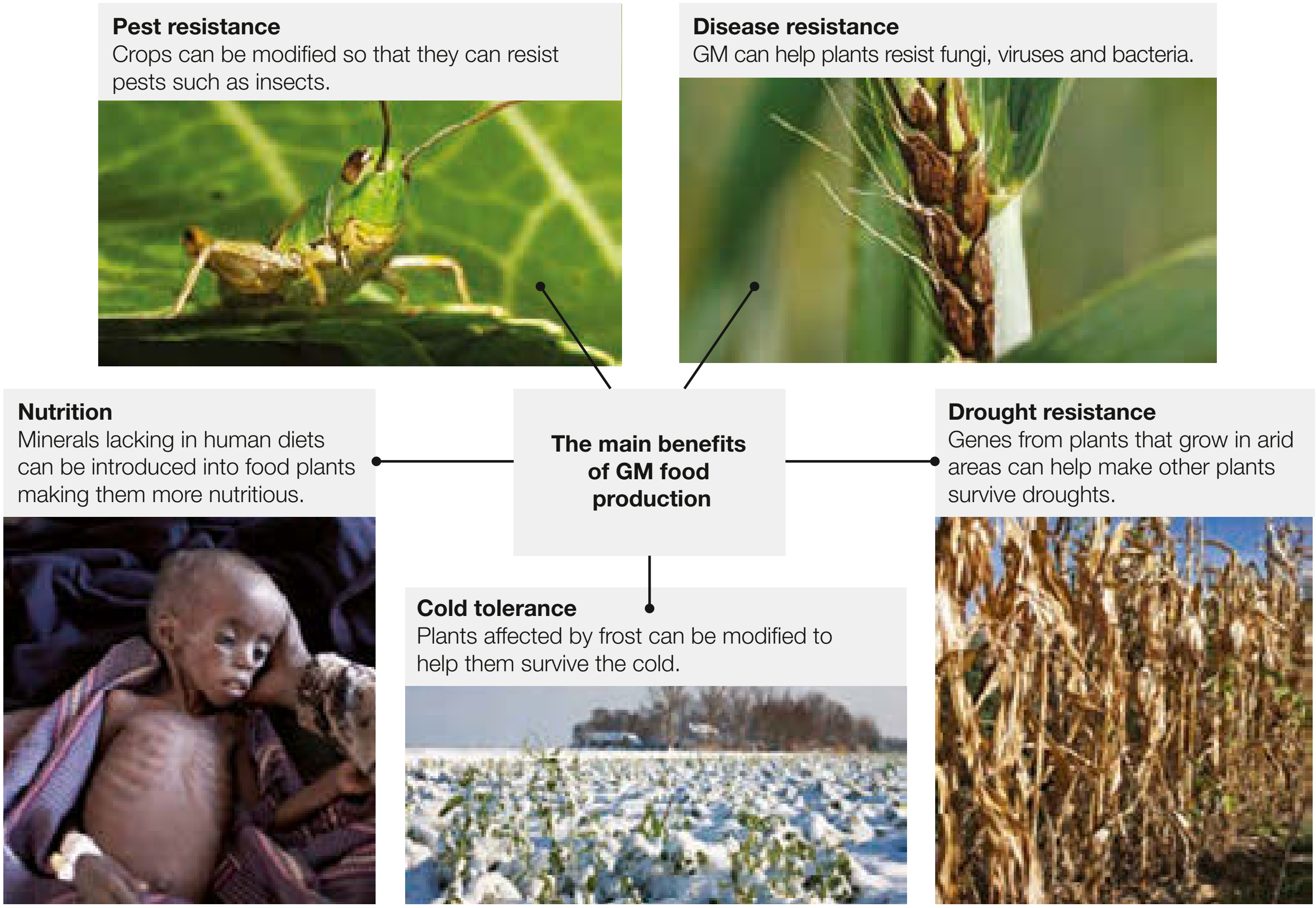
3.12 Genetically modified food

Farmers have taken advantage of natural genetic processes in their farming for generations. Dairy farmers, for example, will choose the most productive cows to breed with carefully selected bulls in order to produce offspring who produce the most milk. This is known as selective breeding.

Some farmers, using modern scientific discoveries and techniques, have taken this selection process a step further. All living things are made up of cells containing genes. These genes determine how each organism grows, acts and looks. Scientists are able to change the genes of plants and animals to give them certain desirable qualities known as traits. This is known as genetic modification (GM). In one example of genetic modification, scientists developed a cotton plant that produced a natural insecticide. This has resulted in a 90 per cent decrease in the amount of chemicals used to control insect pests on many Australian cotton farms since 1996.

Source 1 Some canola crops in Western Australia are genetically modified to produce larger yields and require fewer sprayings of herbicide. Canola is present in many foods such as margarine, bread, mayonnaise and potato chips.

The main benefits of GM food production



Pest resistance
Crops can be modified so that they can resist pests such as insects.

Disease resistance
GM can help plants resist fungi, viruses and bacteria.

Nutrition
Minerals lacking in human diets can be introduced into food plants making them more nutritious.

The main benefits of GM food production

Drought resistance
Genes from plants that grow in arid areas can help make other plants survive droughts.

Cold tolerance
Plants affected by frost can be modified to help them survive the cold.

Source 2 The five main benefits of producing genetically modified food

Opposition to GM foods

Many people are opposed to the genetic modification of food. They are concerned that GM foods are gradually becoming a part of our everyday diet without us knowing very much about the long-term effects. They are also concerned about the possible impacts of GM crops on other organisms such as the animals that eat the crops, which are then used for human consumption.

Environmentalists are worried about the impacts of GM crops on the environment and on the balance of ecosystems. They believe that some characteristics from GM plants, such as a resistance to herbicides (weed killers), may be passed onto other plants within the environment and even the weeds themselves.

GM foods in Australia

In Australia, many foods containing GM plants are already available on our supermarket shelves. You have probably eaten some GM foods today. These foods are checked for their safety and must be labelled as being genetically modified (see Source 4).

Source 3 Genetically modified foods that are available in Australia. The name of the GM crop (see column 1) differs from the way it appears on food labels (listed in column 2).

GM crop	The way it appears on ingredients lists	Examples of foods in which it may be used
Canola	• Vegetable oil/ canola oil	Cooking oil, margarine-type spreads, mayonnaise, bread, cakes, biscuits, snacks (such as potato chips)
Corn	• Glucose/glucose syrup/dextrose	Cakes, biscuits, muffins, muesli bars, breakfast cereals
	• Fructose	Cakes, muesli bars
	• Maltodextrin	Simmer sauces, cake mixes, snacks, breakfast cereals, peanut butter
	• Modified starch/ thickener	Cakes, biscuits, muffins, muesli bars, sauces, breakfast cereals
Cotton	• Vegetable oil/ cottonseed oil	Cooking oil, margarine-type spreads, mayonnaise, snacks (such as potato chips), simmer sauces
Soya bean	• Soy oil/ vegetable oil	Mayonnaise
	• Soy protein/ vegetable protein	Breads, cakes, biscuits, snack foods
	• Soy lecithin/ emulsifier (322)	Breads, cakes, biscuits, chocolate, margarine-type spreads, sauces

Source 4 In Australia, foods with genetically modified ingredients must disclose this on the label.

GM crops such as canola have been growing in Western Australia for over a decade. The Department of Agriculture and Food, Western Australia (DAFWA) is contributing to the development and productivity of safe GM foods in the state to ensure food security and profitability for farmers into the future. DAFWA also manages research facilities in Merredin and Katanning called New Genes for New Environments, which support the development of GM crops designed to thrive in Western Australian conditions.

Check your learning 3.12

Remember and understand

1 What are the main benefits of GM foods?

2 Examine Source 3. Did you know that so many foods in Australia contain GM ingredients? Do you eat any of these foods regularly?

Apply and analyse

3 Check the food labels of five foods you eat often. How many of them contain GM ingredients? Compare this to your classmates' results and work out a percentage of these foods that are partially GM.

4 Why is it beneficial for farmers to reduce their use of chemicals such as pesticides and herbicides?

Evaluate and create

5 How do you feel about GM foods? Write a 250–300 word piece explaining your point of view.

6 Which of the benefits of GM food production do you think has the greatest potential to increase global food production? Give some reasons for your answer and discuss them with the class.

7 Research one of these GM crops: Golden rice, Bt cotton, Fortuna potatoes, Flavr Savr tomatoes or GM bananas. How, why and where have these crops been modified?

3.13 Sustainable agriculture and innovation

Geographers and environmental scientists classify different farming and agricultural practices in terms of the impact they have on the environment. At one end of the scale is the type of farming that relies heavily on human intervention with nature, using technology. Turning over the soil with machinery (tilling), and adding chemical fertilisers and pesticides are characteristics of this type of farming.

At the other end of the scale is the type of farming that requires only minimal human interaction with nature and disturbance of the natural environment. Known as 'minimum impact farming' or '**conservation agriculture**', this type of farming is seen by many experts and farmers as the best way to increase food production while protecting and restoring the natural environment.

Conservation agriculture is the practice of adopting resource-saving production methods – adding elements such as water, seed and fertiliser that complement natural processes. This aims to achieve high and consistent levels of production, while conserving the environment at the same time. Australian farmers are leading the world in the adoption of this type of farming. A 2008 survey of Australian grain farmers found that about 80 per cent were using conservation agriculture techniques compared with less than 5 per cent in 1980.

The three key principles of conservation agriculture:

- Principle 1 – Do not disturb the soil by tilling (see Source 1).
- Principle 2 – Keep the soil covered with organic material (see Source 2).
- Principle 3 – Grow a range of plants, not a single crop (see Source 3).

CONSERVATION

Source 2 Principle 2: Keep the soil covered with organic material such as stalks from the previous harvest as mulch.

Source 1 Principle 1: Do not disturb the soil by tilling (turning it over). Plant crops by drilling seeds instead. Tilling leads to soil erosion and disturbs the microorganisms in the soil that are crucial for fertility.

Source 3 Principle 3: Grow a range of plants including trees, shrubs, crops and pastures. This encourages natural biodiversity and crop nutrition and aids resilience to pests.

key**concept:** Sustainability

Farmer-managed natural regeneration

A well-known form of conservation farming is called **permaculture**. This type of farming brings together the resources of the natural environment and the people who use those resources for their food, energy, shelter and other needs. The emphasis is on the careful and thoughtful use of nature to ensure the sustainability of Earth's ecosystems – using nature to support the farming rather than working against nature.

Farmer-managed **natural regeneration** is a form of permaculture used to combat poverty and hunger among poor subsistence farmers in developing countries. It uses old methods of management to encourage continuous growth of trees on farmland. When woodland management techniques are followed, trees are integrated into crops and grazing pastures. As a result there is an increase in crop yields and soil fertility and a decrease in wind and heat damage, and soil erosion.

For more information on the key concept of sustainability, refer to page 9 of 'The geography toolkit'.

Source 4 This area of Jordan is a garden developed by an Australian permaculture expert, which uses natural regeneration techniques.

Case study: regreening the desert in Niger

The country of Niger in Western Africa lies in the Sahel, a vast arid belt of **savanna** that crosses Africa, south of the Sahara Desert (see Source 5). This zone is considered to have the highest levels of food insecurity in the world. A combination of poor rains and overuse of the land and water mean that crops regularly fail there. In the last 25 years, however, there has been a remarkable transformation across much of Niger.

Five million hectares of degraded land have become productive again, increasing the amount of food grown in some areas fivefold. This produces an extra 500 000 tonnes of grain each year, feeding an extra 2.5 million people. Vast areas that were once infertile dust bowls incapable of supporting any farming are now green croplands, returning food security to one of the world's poorest nations.

This dramatic change is due largely to the work of an Australian, Tony Rinaudo, and a simple discovery he made in Niger. For generations, Niger's farmers had seen trees in their fields as a source of wood for fuel and a nuisance to farming. Millions of trees had been cleared from the landscape to make way for small farms.

'An underground forest'

When Rinaudo arrived in Niger in 1981, he began planting new trees but they kept dying. He noticed, however, that the roots of the trees that had already been cleared still lay in the ground and were soon sending up new growth in the form of saplings. He called these roots an 'underground forest'.

He convinced a few farmers to carefully prune this new growth rather than clear it completely. The trees soon returned to the landscape bringing shade and wind protection to crops and animals, preventing erosion, providing firewood for the farmers and adding organic matter and nutrients to the soil. The crop yields of those farmers who pruned and protected their trees increased dramatically. Other farmers soon followed their example. It is estimated that around 200 million trees have been protected in Niger and the technique is now being used across the Sahel to help increase food security for millions of people.

skill**drill**

Analysing satellite images

A **satellite image** is a photograph taken from space. Satellite images have become one of the most useful tools for geographers, as they provide a snapshot in time of a large area of the Earth's surface. This allows us to identify patterns and changes over time, and to better understand the causes and effects of these patterns and changes.

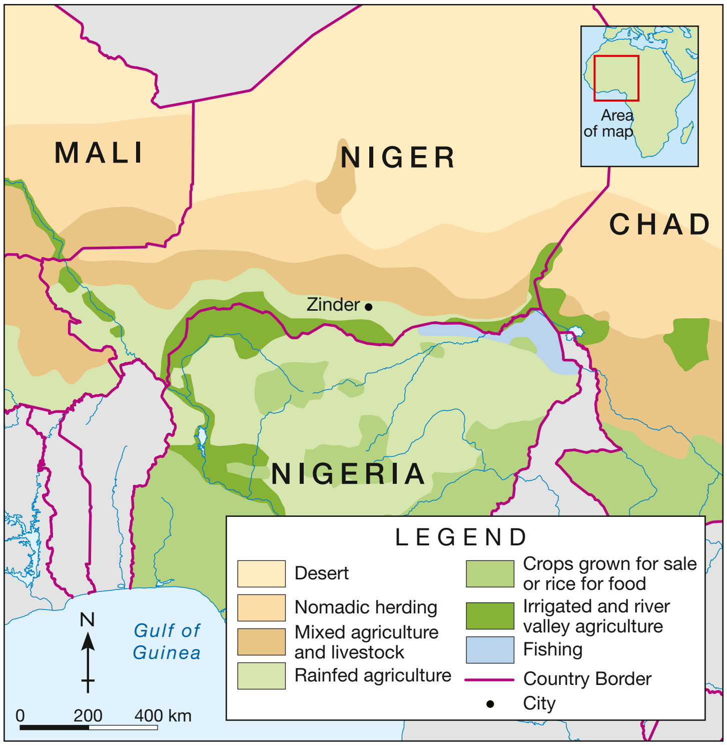
When analysing a satellite image or set of images, follow these simple steps.

Step 1 Identify the exact area shown in the image or images. Use an atlas to verify where they were taken. Take note of other features in the region such as international borders, mountains and cities.

Step 2 Look closely at the image for features you can identify. A satellite image is taken from directly above (**plan view**) so objects appear in their correct location and size relative to each other.

Step 3 When comparing two satellite images of the same places taken at different times, note the dates when the images were taken. Look for changes that have occurred between these two dates.

AFRICA, NIGER: LAND USE IN THE SAHEL REGION



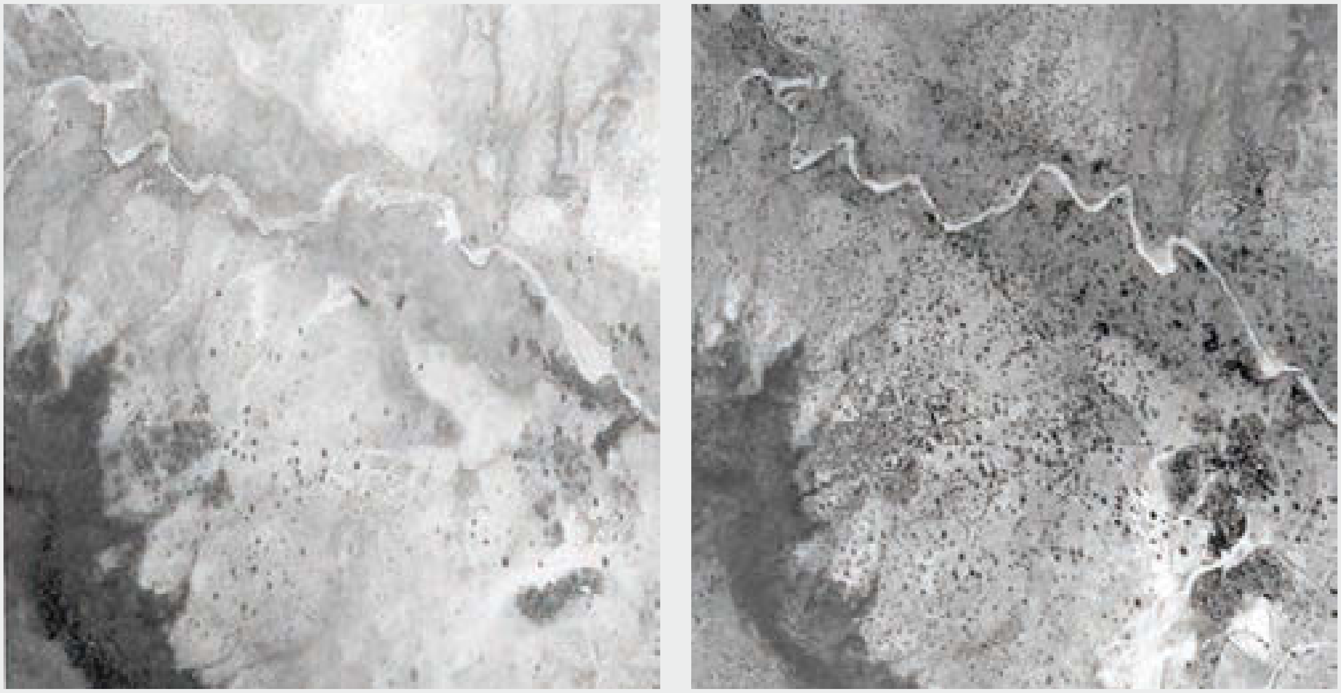
Source 5

Source: Oxford University Press

Apply the skill

1 Describe the landscape in the 1975 satellite image in Source 6. Each dark grey dot is a tree. Estimate the number of trees.

2 Describe the changes between 1975 and 2005 in Source 6. Include an estimate of the number of trees and also their distribution.



Source 6 Dual satellite images of the Zinder area of southern Niger in 1975 (left) and 2005 (right)

Check your learning 3.14

Remember and understand

1 What is tilling?

2 What are the three key principles of conservation agriculture?

3 What is permaculture?

4 Describe the method of revegetation developed by Tony Rinaudo.

Apply and analyse

5 Why is drilling seed directly into the soil better than tilling the ground and then planting seed?

6 How does using a variety of plants (principle 3) help to reduce pests such as weeds and invasive insects?

7 How does covering the soil with organic material (principle 2) help to conserve water? How would it benefit the soil?

8 Examine Source 5. Describe the location of the Sahel.

9 Describe land use patterns in Niger from north to south. Why do these variations in land use occur in this country?

Evaluate and create

10 The permaculture garden shown in Source 4 shows what is possible on a local scale. Do you think permaculture principles could be applied on a national or global scale? Discuss this with a partner and then with your class.

11 Permaculturalists limit their use of chemical fertilisers and pesticides. How do you think they achieve this?

12 You can use the historic imagery feature on Google Earth to explore satellite images and aerial photographs of Niger. Find a region that has changes similar to those in Source 6.

13 What lessons from the experience in Niger could be applied to other places struggling to maintain food security?

3C rich task

Food waste and food loss

It has been estimated that around one-third of all food is lost or wasted around the world every year. **Food loss** refers to the amount of food lost during the growing or production process. In developing countries, most food tends to be lost during production because of problems in harvesting, storing, cooling, packaging and marketing by producers. This equates to around 1.3 billion tonnes.

Food waste refers to the amount of food thrown away during the consumption process. In developed countries most food waste is carried out by consumers and retailers rather than food suppliers. Consumers tend to reject food that is not perfect in appearance. They also tend to buy too much food, which spoils or passes its 'best-before' date. Reducing food waste and food loss would help increase food security in many places.

Source 1 Australians tend to buy more food than they need, leading to a high level of food waste.

Source 2 This Mongolian boy is transporting milk without refrigeration, which could lead to a high level of food loss.

skill**drill**

Preparing an infographic

An increasingly popular way for geographers to present their findings and data is to prepare an infographic. Infographics use pictures and symbols to represent complex ideas and data so that information is clear and quickly accessible. Follow these steps to produce your own infographic.

Step 1 Decide on a topic and the message that you want to communicate to your audience. In the infographic in Source 4, for example, the key message is that people waste a huge quantity of food.

Step 2 Research your topic and collect data that helps to communicate your key idea. Try not to have too much data; don't include more than 10 key facts or numbers.

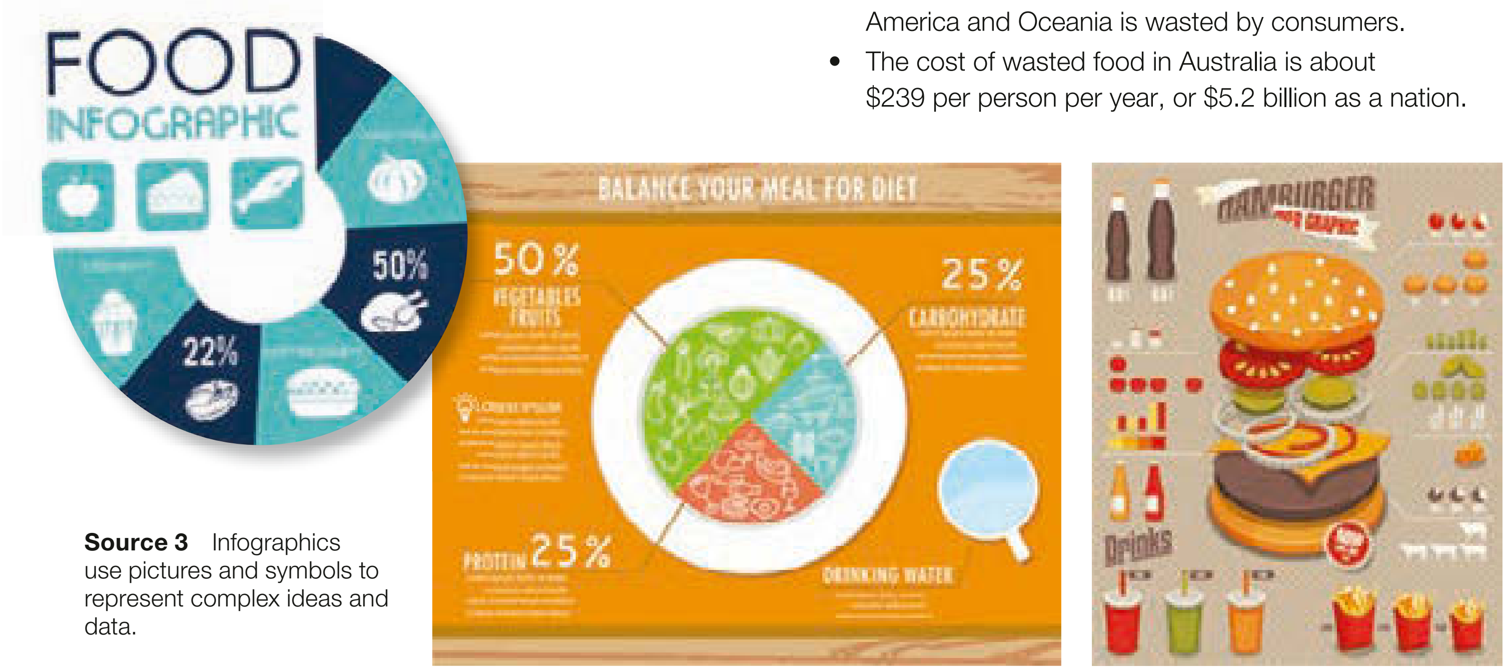
Step 3 Use a simple picture to communicate each of your key facts. The digger and hole in Source 5, for example, communicates that food is being dumped in landfill.

Step 4 Lay your graphics out in a logical way that links together the key ideas. Make sure your infographic is not too cluttered. Give your infographic a catchy title that communicates your message – something like, 'From Farm to Plate', 'Waste not, want not' or 'Starve the landfill'.

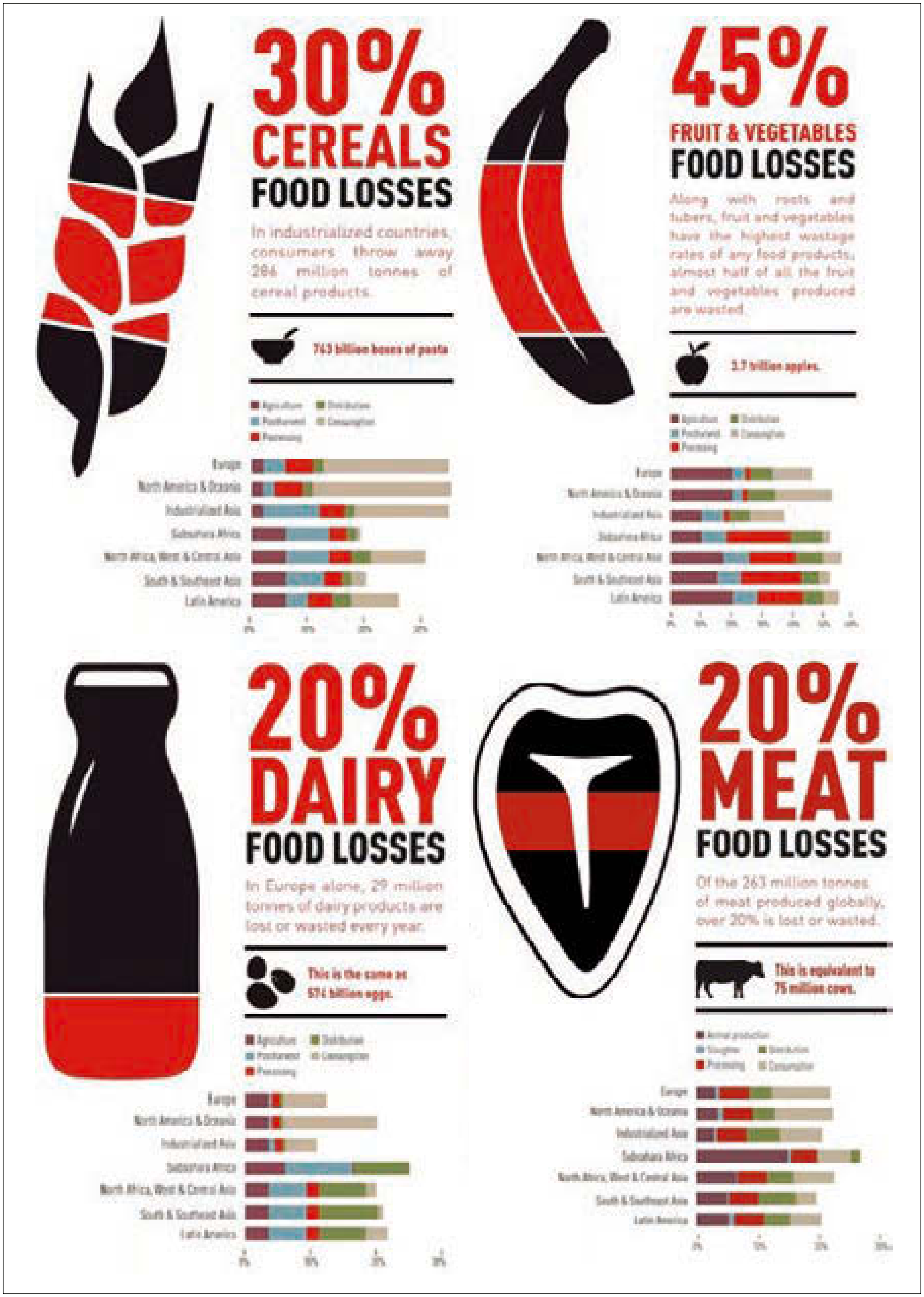
Apply the skill

1 Design and present an infographic on an aspect of food waste. Here are some facts that you can use to help you get started. Many of these come from a UN report, *Global Food Losses and Food Waste*.

- One-third of all food is wasted or lost.
- Up to 50 per cent of fruits and vegetables are wasted every year.
- Total food wasted and lost in North America, Oceania and Europe is 280–300 kilograms per person per year. The amount of this that is food wasted by consumers is 95–115 kilograms.
- In Sub-Saharan Africa, 120–170 kilograms is wasted or lost, about 6 kilograms of it by consumers.
- In developing countries, more than 40 per cent of food loss occurs in harvesting, transporting and processing. In developed countries, more than 40 per cent of losses occur at the retailing and consuming stages.
- The total amount of food wasted every year in developed countries is about the same as the total amount of food produced in Sub-Saharan Africa, which supports close to 900 million people.
- One-third of all fish and seafood produced in North America and Oceania is wasted by consumers.
- The cost of wasted food in Australia is about $239 per person per year, or $5.2 billion as a nation.



Source 3 Infographics use pictures and symbols to represent complex ideas and data.

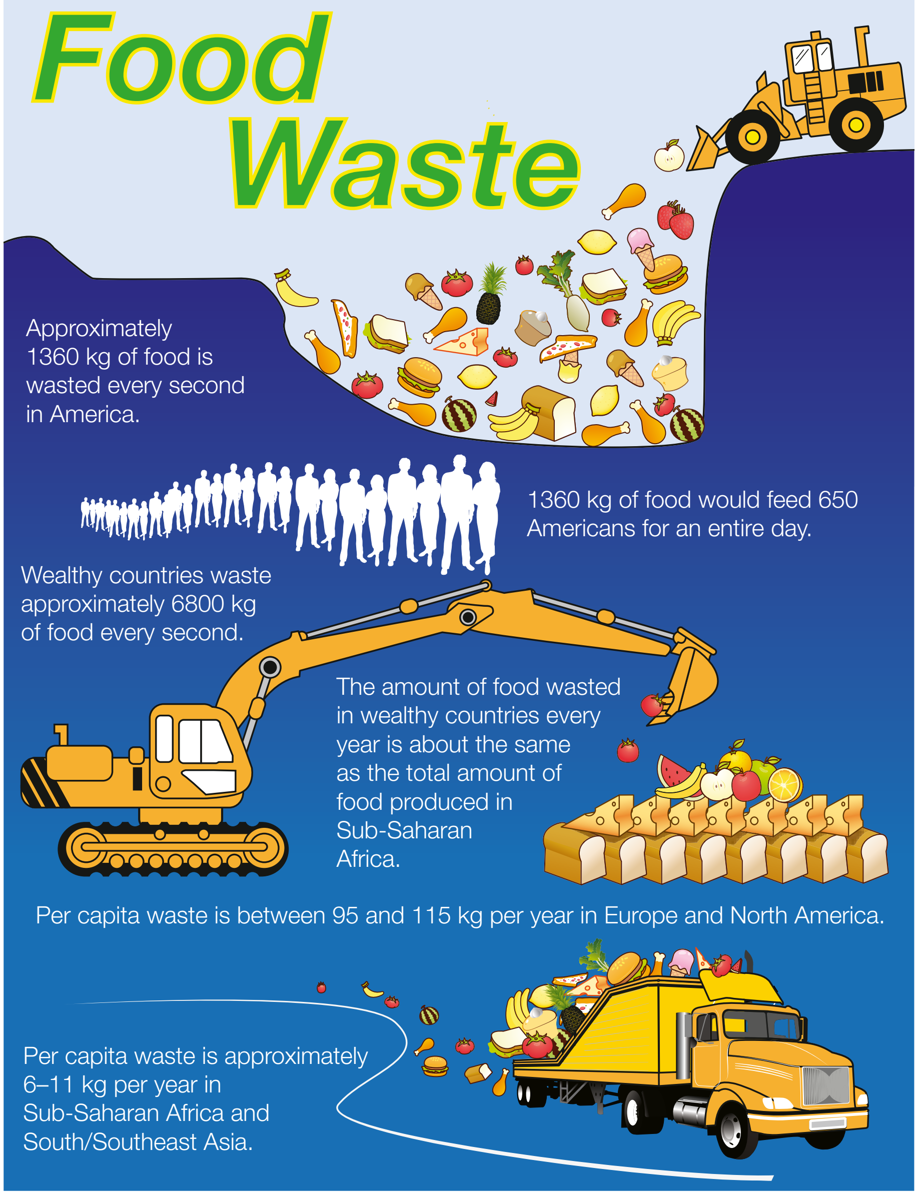


Source 4 Food waste is a serious issue for many countries around the world. This infographic shows the percentage of waste worldwide each year for different food groups.

Extend your understanding

1 Keep track of your household's food waste for a week. This means taking note of all edible food that is not eaten, and includes food that is wasted during meal preparation (such as peelings), food served but not eaten, or food that is spoiled and discarded. This could be placed into a bucket and weighed every day. Multiply the total amount by 52 to find out the amount of food wasted per year at your house. Compare this result to those of your classmates.

2 One of the main reasons why food is wasted in Australia is linked to consumer demand for fruit and vegetables that are pleasing in shape and appearance. Blemished items such as curved carrots or spotted apples are often taken out by the food producer, discarded by the retailer or not chosen by the consumer. Design an advertising campaign to reduce this aspect of food waste. Your campaign may take the form of a television, newspaper or social media advertisement, or a combination of these.



Approximately 1360 kg of food is wasted every second in America.

1360 kg of food would feed 650 Americans for an entire day.

Wealthy countries waste approximately 6800 kg of food every second.

The amount of food wasted in wealthy countries every year is about the same as the total amount of food produced in Sub-Saharan Africa.

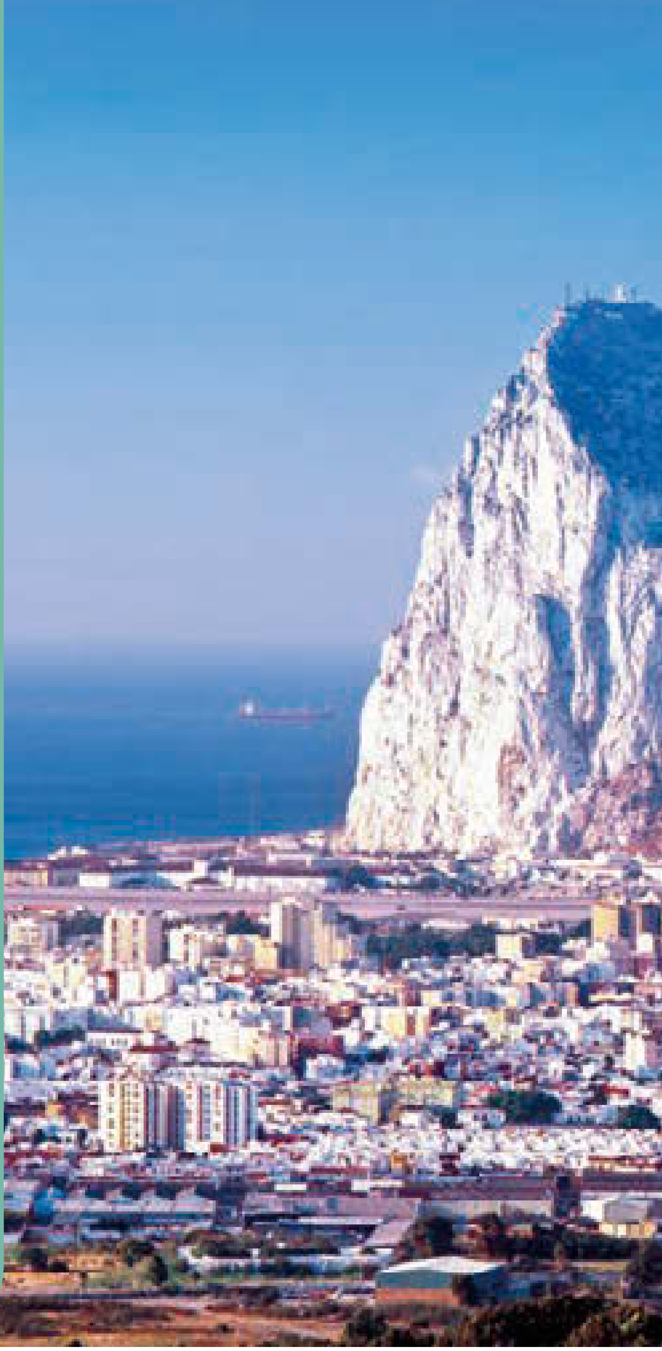
Per capita waste is between 95 and 115 kg per year in Europe and North America.

Per capita waste is approximately 6–11 kg per year in Sub-Saharan Africa and South/Southeast Asia.

Source 5 Infographics are a good way to convey a lot of information in a simple, visual way so that it can be quickly understood.

Geographies of interconnection

An interconnected world



This is Gibraltar, a British territory that lies on the southern tip of Spain in a body of water that connects the Atlantic Ocean to the Mediterranean Sea. This means it is strategically significant for shipping between Europe and the rest of the world. For this reason, disputes over the territory have resulted in many wars over the past 500 years.

Though once heavily fortified to protect its inhabitants from invasion, Gibraltar is now highly accessible. It has a busy international airport, container port, a cruise-ship harbour and is connected by road to Spain. It receives almost 12 million tourists a year. Connected to the world by trade, tourism, transport and communications, Gibraltar illustrates how every place on Earth is connected to every other place more than ever before.

4A

How do people connect to places?

1. Gibraltar is famous for a 426-metre high rock, the Rock of Gibraltar, which is a popular drawcard for tourists. Do you think the people who live within sight of the Rock would regard it differently than a visiting tourist would?
2. In what ways might a resident feel differently about Gibraltar compared to a tourist?

4B

How are people and places around the world connected?

1. Describe some of the ways in which Gibraltar is connected to other places around the world using evidence from this picture. Are there other likely connections that are not shown in this picture?

chapter 4

Source 1 Gibraltar is a compact country at the southern tip of Spain. Its coastal location and access to many countries means it has been a highly sought-after territory over the course of history.

4C

How does trade connect people and places?

1 Gibraltar has little land that is suitable for farming and food production. Where do you think the people who live there get most of their food from?

4.1 Understanding place

Everyone has **places** that mean something special to them. You can probably think of a place right now that has a particular significance for you. It could be a corner of your room where you listen to music, or a local sports ground where you train with your friends – somewhere that you identify with and has meaning for you. Indeed, this is how geographers define the concept of place – as parts of the Earth's surface that are identified and given meaning by people.

A place can be as small as your bedroom or as large as a continent. It can be a constructed feature, such as a building, or a naturally existing feature, such as a freshwater lake.

The key concept of place is essential to geographers. By dividing the Earth's surface into a series of identifiable places, geographers can better understand the natural processes and human activities that shape and change our world.

People may be attached to different places for different reasons, and places can mean completely different things to different people. For example, the tourists in Source 1 might perceive this place as an opportunity to see something unique and to photograph it. The bus driver who brought them here and the owner of the resort where they are staying may see it quite differently – as somewhere that provides them with employment and an income. The Indigenous people of the region, the Anangu, attach a very different meaning. For them, this place has a deep spiritual importance.

It is part of their culture and is regarded as sacred. They have a duty to care for and protect it.

Interconnections between places

We all create places of our own by defining them and giving them meaning, and all of these places are interconnected. Geographers use different ways to understand and explain these **interconnections**.

No place exists in isolation. Not even a rock in a mountain riverbed or a single tree is isolated. Every place is interconnected with another. The place where you live is connected to a neighbourhood, the road outside the school connects it with different suburbs, and entire continents are connected to each other in many ways, too.

Some of the interconnections between places are the result of natural processes. The rock in the riverbed mentioned above, for example, may be connected not only to the other surrounding rocks but also to other areas entirely. Fast-flowing rivers, for example, wear down rocks into tiny pieces and then carry these pieces to the coast, where they are shaped into new features such as sand dunes and sandbars. This process links together the mountains and the coast.

Other interconnections are the result of human activities such as trade, transport and communication. These move people, goods, services and ideas between places, linking them together.

People interconnect with other people through their surroundings, ther work, their hobbies and cultural sites. There are various ways that geographers explain how and why we connect to place, and these will be examined in more detail in this chapter.

Source 1
Uluru is a place that has been identified and given meaning. Like all places it has both tangible (able to be touched) and intangible (not able to be touched) characteristics. The rock, the plants and the soil are all tangible while the scenic beauty, cultural significance and economic value are intangible.

key**concept:** Place

Comparing different perceptions of place

How you perceive and use a place can be influenced by many different factors. The same place can be perceived in different ways by different people – a historian might perceive a museum as a fascinating place to visit, for example, while a teenager might think it is quite boring. The same place can be used in very different ways, too. The steps outside the museum could be used as a place to go skateboarding, or at other times as a backdrop for wedding photos.

A park that is filled with families on a bright sunny day might seem like a safe, enjoyable place to go with a friend, but the same park might seem very different to you if you found yourself there in the middle of the night alone. Factors that influence how you perceive places include:

- your age
- your ethnic origin
- your gender
- the time of day or night you are visiting the place
- whether you are travelling to the place alone or in a group
- whether you have a disability or are able-bodied.

For more information on the key concept of place, refer to page 6 of 'The geography toolkit'.

NO TO RACISM NO TO ISLAMO-PHOBIA
MUSLIMS ARE WELCOME RACISTS ARE NOT

Source 2 There are many factors that might influence the way someone perceives a place.

Check your learning 4.1

Remember and understand

1 Write a definition of the term 'place' in your own words.

2 Read the caption for Source 1. Now think of a place that you know well. Describe this place in terms of its tangible and intangible characteristics.

3 Explain how new technologies have helped to create greater links between people and places.

Apply and analyse

4 Examine Source 2. How do you think the people in these photos feel about the places shown? How might a different person feel about each of the places?

Evaluate and create

5 Give an example of a place in your area that is used for more than one purpose. Design a poster showing the different ways in which it is used. Try to think of as many people as possible who might use the place, the different ways they might use it, and what their perceptions of the place might be.

4.2 Connections to place

Most of the reasons why people feel a sense of connection to place can be grouped under the following four criteria:

- **spiritual** – factors related to a person's beliefs
- **economic** – factors related to employment and income
- **cultural** – factors related to the shared characteristics of a group of people
- **historical** – factors related to past experiences and events.

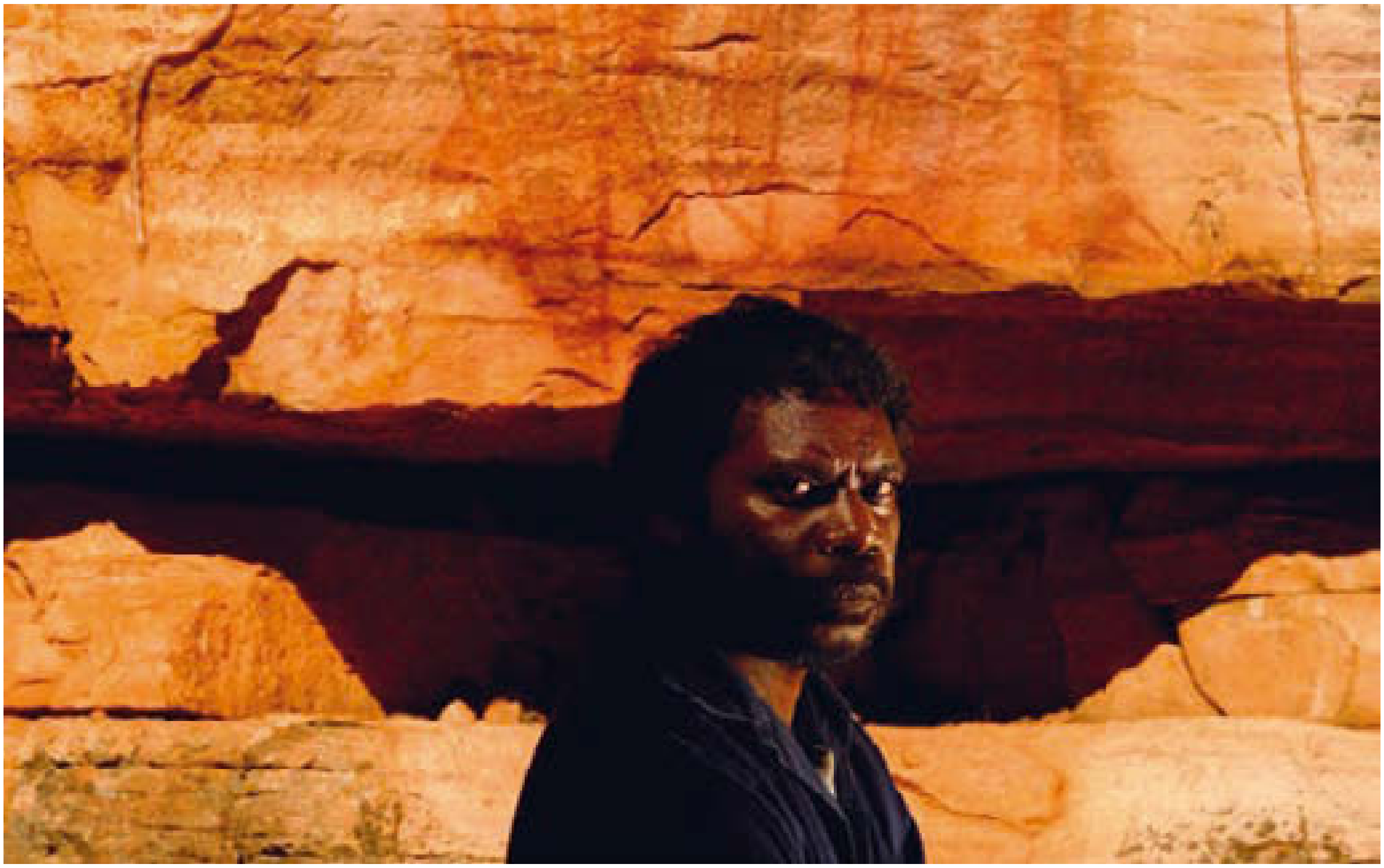
Spiritual factors

Many people feel connected to particular places because of their beliefs or the way a place makes them feel. Sometimes this connection can be difficult for other people to fully understand but this does not make the connection any less real or important. For example, many Aboriginal and Torres Strait Islander people have a deep and complex spiritual connection to places in the natural world that other people in the wider community do not have.

Jeffrey Lee, the sole survivor of the Djok clan in the Northern Territory, could have become one of Australia's richest men (see Source 1). He is the custodian of land that contains vast deposits of uranium. However, when a French energy company offered him millions in royalties to allow them to mine the uranium, he declined.

Instead, he offered the land to the Federal Government so that it would be included as part of Kakadu National Park, and therefore protected from mining.

'When you dig 'em hole in that country, you're killing me. Money don't mean nothing to me. Country is very important to me,' he told newspaper reporters. Mr Lee believes that it is his responsibility to look after the land and that digging into the ground would disturb the spirits that live within it. 'There are sacred sites, there are burial sites and there are other special places out there which are my responsibility to look after.



Source 1 For Jeffrey Lee, the spiritual importance of the land far outweighs any potential monetary gain.

PROTECT THE KIMBERLEY
NO GAS!

Source 2 A van parked in Broome protesting the gas **extraction** in the Kimberley region shows how the economic connection to place can be at odds with those who have other factors that influence their connection.

I'm not interested in white people offering me this or that … it doesn't mean a thing. I'm not interested in money. I've got a job; I can buy tucker; I can go fishing and hunting. That's all that matters to me.'

Economic factors

Many people feel a connection to particular places because these places provide them with employment or a source of income. In the previous example of the proposed uranium mine in the Northern Territory, the French mineral company was interested in connecting to this place because of economic opportunities. In the same way, a farmer will feel connected to the place in which he or she farms and a tourism operator will feel connected to the place that tourists come to visit.

In countries where personal wealth is viewed as a desirable goal, economic connection to place may take precedence over less tangible reasons for connection, such as spiritual or historical factors. Different reasons for connecting to place can cause disagreement, protest and even conflict between individuals and groups.

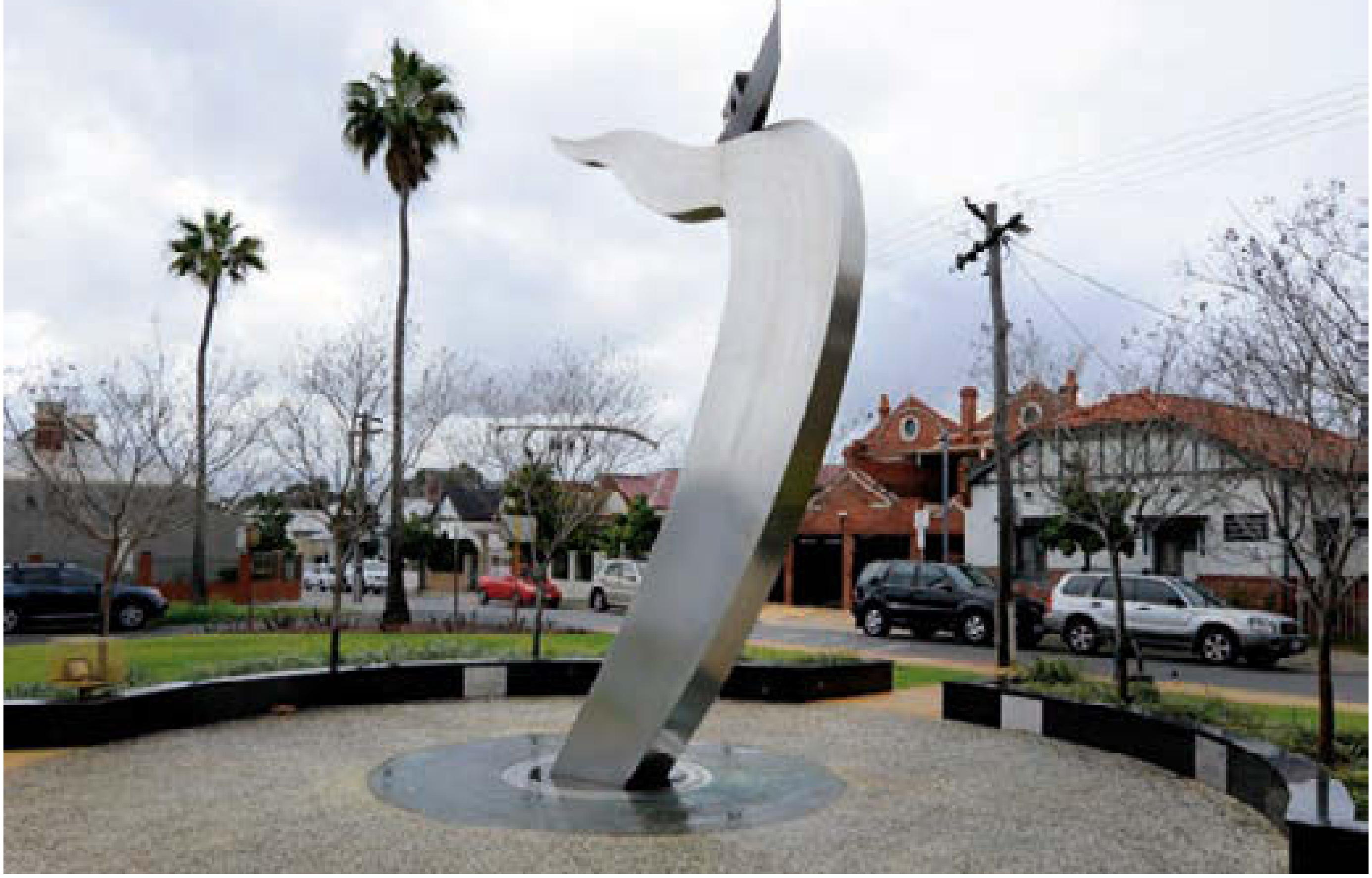
In parts of Queensland and New South Wales, for example, there is widespread disagreement about mining gas from the rocks beneath farming areas (see Source 2). Many farmers believe that the process used to extract the gas degrades their land and water, but mining companies point out that the gas is needed by many people for heating and cooking. Many protests have been held to try and influence state and federal governments to more closely control or stop the mining of this gas.

Cultural factors

Connections to place can also be strongly influenced by a range of cultural factors. This can include the perceived historic value of a place, and how that is meaningful for people in the present, the past and even into the future. The notion of cultural heritage can be an important motivating factor for connection to place.

People with similar interests, backgrounds and heritage often connect with each other to form communities. Immigrants to a new country, for example, tend to live close to other recent arrivals from the same country. This allows them to connect more easily to people with the same language and culture and therefore to fit more easily into their new community.

This happens all around the world and creates areas of ethnic concentration. In New York, for example, there are neighbourhoods known as Little Italy, Chinatown, Little Manila, Le Petit Senegal, Jamaica, Koreatown and Spanish Harlem. The residents of these places may feel connected to the area in which they live because of their cultural connections.



Source 3 The Vietnamese Boat People Monument of Gratitude in Northbridge was built by the Vietnamese Community Association in Western Australia.

Case study: Vietnamese in Perth

As a result of the Vietnam War in the 1960s and 1970s, millions of people fled Vietnam to find refuge elsewhere. Many Vietnamese refugees crammed into small boats to escape and became known as 'boat people'. More than 112 000 Vietnamese came to Australia in the 20 years after 1975, with strong populations in Cabramatta, Sydney, and Springvale, Melbourne. Perth is now home to well over 15 000 people from Vietnam. They joined a large and growing migrant population from many other places.

Like many other migrant groups, Vietnamese Australians in Perth are able to stay connected with their culture and serve their community through a non-profit organisation called the Vietnamese Community Association (VCA). Activities of the VCA in Western Australia include promoting and preserving Vietnamese culture through traditional events and festivals, helping Vietnamese refugees settle into Australian society and fostering community spirit among Vietnamese Australians.

In 2013, the Western Australian chapter of the Vietnamese Community Association unveiled the Vietnamese Boat People Monument of Gratitude in Northbridge. As a symbol of special cultural significance in the history of Vietnamese Australians, the monument was built to remind the next generation, and the rest of Australia, about the terrible suffering that the first wave of Vietnamese refugees went through as they crossed dangerous seas to arrive in a safer place.

Two plaques at the bottom of the monument connect the community to both their home in Vietnam and their home in Australia. They read:

'In memory of the Vietnamese refugees who perished in the exodus since 1975'

'This monument represents our gratitude to Australia, for embracing the Vietnamese refugees into this great nation.'

Historical factors

Events that happened in the past can also result in people forming special connections to particular places. These may be recent events or events from hundreds of years ago, but they can form powerful links between people and places. For many people, the places they visited on holidays as children remain special places well into their adulthood because of the memories these places hold.

On a wider scale, important historical events can give particular places a special meaning. Such historical events could include a war or battle such as Gallipoli (see Source 5), a terrorist attack such as the Bali bombings, or the birthplace or burial place of a famous person. In some towns and cities, places of historical significance might be marked with a statue or other commemorative marker. In London, for example, many places that are connected with historical events and people are marked with blue memorial plaques (see Source 4).

The strong connection some people feel with a place for historical reasons can explain why many people feel strongly about the demolition of old buildings or the development of a site for a new apartment block. It also helps to explain why people may have a special connection to battle sites thousands of kilometres away or to the wharf where they first arrived in Australia as a refugee.

ENGLISH HERITAGE
JOHN LENNON
1940-1980
Musician and Songwriter
lived here in
1968

Source 4 Blue plaques in the UK mark places where people may feel a historical connection due to an event that occurred or a person that lived at that place.

Source 5 Many Australians and New Zealanders feel a special connection to Gallipoli in Turkey because of battles fought there a century ago. These people are attending an Anzac Day dawn service at Gallipoli.

Check your learning 4.2

Remember and understand

1 Why might people sometimes find it difficult to understand another person's spiritual connection to a particular place?

2 Why do people with similar cultural backgrounds often stay connected to each other?

3 Why would some farmers in Queensland and New South Wales protest about gas mining in the places where they live?

Apply and analyse

4 Re-read the information relating to Jeffrey Lee.
  a Describe the connection he has to the place in which he lives.
  b Why does he have this connection?
  c Is this the same way you feel about the land? Why or why not?
  d Account for the similarities and differences between his connection to the land and yours.

5 What might be some of the important hubs for Vietnamese people in Perth? Are there similar hubs in your local area? Are you connected to these places for similar reasons?

Evaluate and create

6 Many people feel a connection to places where important events occurred in the past. Find out why many Australians have a special connection to Gallipoli in Turkey, or to Kuta in Bali.

7 The Yasukuni Shrine in Tokyo, Japan, is an example of a place that inspires strong feelings in people. Research the shrine and investigate why people might have different connections to this place. Design a poster that shows the results of your research.

Source 6 Yasukuni Shrine in Tokyo, Japan, is a place that inspires a range of different reactions in people.

4A rich task

Mental maps versus GPS

A **mental map** is a map that we keep in our heads, rather than on paper or in our phone. We all carry a map in our head of our local area. This allows us to find our way quickly and easily between places. We tend to know the places we use often and the spaces between them much better than the places and spaces we rarely use or visit. As we all use different places, we each have a unique mental map of our local area.

A study published in the *New York Times* in 2012 found that using a GPS rather than our internal mental map reduces the ability of our brain to build up a mental picture of our environment. While our brains build up layers of information to develop mental maps, a GPS device reduces all of the information to a simple list of distances and directions. By not using the mental maps we have stored, we may risk losing the ability to create them in the first place.

The report concludes with this advice:

'Next time you're in a new place, forget the GPS device. Study a map to get your bearings, then try to focus on your memory of it to find your way around. City maps do not tell you each step, but they provide a wealth of abstract survey knowledge. Fill in these memories with your own navigational experience, and give your brain the chance to live up to its abilities.'

Is GPS ruining our mental maps?

Many Australian cars and mobile phones are fitted with a GPS device. GPS or **Global Positioning Systems** use satellites to accurately pinpoint the location of the car or phone. By adding data in the form of a digital map, GPS devices can be used to help us find our way around. For many people, their GPS device has replaced printed maps and written directions as the main way of navigating around an area. Using GPS devices can be extremely helpful, but has using them ruined our own mental maps?

Source 1 GPS devices can translate complex three-dimensional places into a series of lines and instructions that make it easy to navigate.

skill**drill**

Putting a mental map down on paper

A mental map is a simple but effective tool people use to perceive, remember and analyse an area. You can record the mental map you have of an area into hard copy, for yourself or for another person to use, by following these simple steps:

Step 1 Choose an area you know well that you wish to map.

Step 2 Starting with a blank piece of paper, jot down the main places you can remember in the area. Do not refer to street directories or other professionally drawn maps. Remember that there is no 'right' answer for a mental map.

Step 3 Fill in the main roads, pathways and any railway lines that connect places in the area.

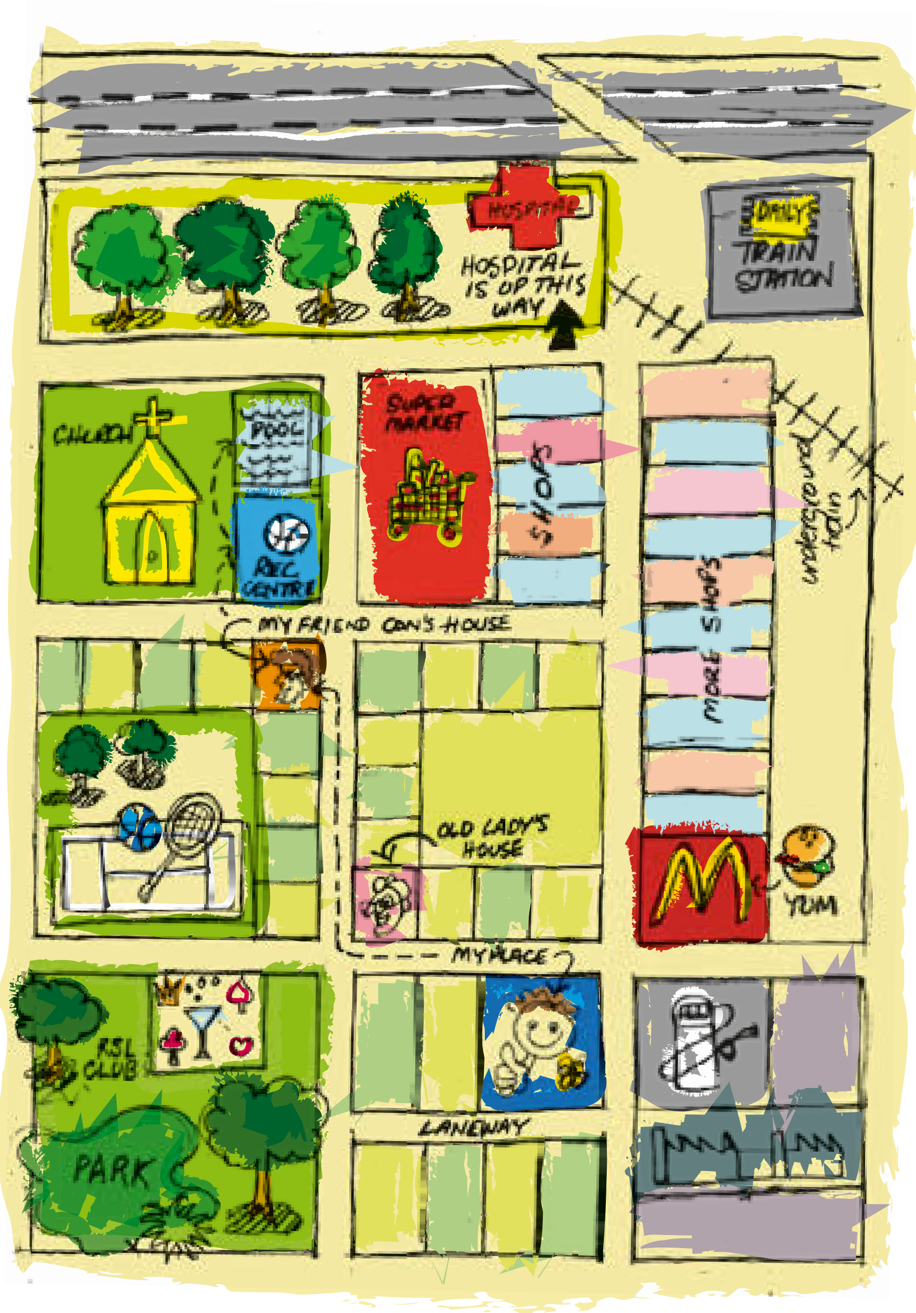
Step 4 Include any parks, ovals or reserves, or any significant natural features you can remember.

Step 5 Mark down any significant landmarks or buildings. These might include a statue on a corner, a church or school, shops or even a wall that features some graffiti art.

Step 6 Continue plotting features, roads, and landmarks until you are satisfied that all the things you can remember as being significant are added to your hard-copy map.

Apply the skill

1 Make a hard copy of your mental map of the area in which you live. It could cover a couple of blocks or more – the size will depend on how much information you keep in your head. Label features that are important to you. This might include shops, your sports club or a friend’s house.



Source 2 Everyone has a mental map of their home area whether they realise it or not. You may be surprised at how much detail you can readily recall about the area where you live and how often you use your mental map.

Extend your understanding

1 Swap your map with another person in your class.
   a Note down any similarities and any differences in what you chose to include in your mental map. What were some of the main differences between the two mental maps?
   b Discuss with your partner what their mental map revealed about them and their perception of their local area. What did the features they included tell you about them? For example, if they included a football field, oval and gym, you could safely say they had an interest in sports. What did they think your mental map revealed about you?

2 Look closely at the mental map in Source 2.
   a What are some of the places in the local area that are important to this person?
   b What does this mental map reveal about the person who drew it?

3 List the pros and cons of keeping a mental map versus using a GPS. Are there any aspects of a GPS that might limit your understanding of an area? Do you think you would prefer to rely on a GPS or a mental map? Why do you think this?

4 Ask a primary school student to draw a mental map of their local area and display them on a classroom wall along with the completed maps from your own class.
   a What were some of the main differences between the two sets of mental maps?
   b Why do you think the mental maps of primary school students differ from those of secondary school students?
   c What has this activity taught you about the ways in which different people perceive their local area?

4.3 What is a global citizen?

'No man is an island, Entire of itself, Every man is a piece of the continent, A part of the main.'

The English poet John Donne wrote these words way back in 1624. In these lines he expresses the idea that every person is connected to someone else. This is as true today as it was nearly 400 years ago. The more we learn about our amazing planet and the people who live here the more we come to realise that everyone and everything is connected to everyone and everything else.

We are connected to people and places all around the world in many ways. This includes being connected by the food we eat, the clothes we wear, the goods in our homes, the sport we play, the music we listen to and the movies we watch. We are also the most mobile generation in history, travelling for work and for leisure more often and more quickly. As well as these physical and cultural connections, there are the rapidly growing digital connections that break down barriers such as language and distance that once separated people and places.

Global citizens

Each of us is an example of the connected world in which we live. This is true even when we are just sitting at our desk at school – we don't have to physically travel to be connected with other places in the world.

Some people, however, are true global citizens and are linked in many different ways to places all around the world. Cadel Evans, the famous Australian cyclist, is one example of a person who is interconnected globally on many levels (see Source 1). Perhaps best known as the first Australian to win the Tour de France cycling race, Evans was once asked how it felt to be an Australian whose sport has taken him around the world. He replied, 'Chiara's [his wife] Italian, we're living in Switzerland and I'm Australian riding for an American registered team sponsored by a Swiss company'. He could also have added that he and his wife have adopted an Ethiopian child and that his teammates are from 10 different countries.

The life and career of Cadel Evans is a clear example of the many ways we can be connected with many different places.

Source 1 Australia's Cadel Evans (left) rides a stage in the 2011 Tour de France. He is surrounded by cyclists from Spain, Kazakhstan, Colombia, Belgium and Norway. The race was televised in 190 countries and watched by an estimated 3.5 billion people around the world.

key**concept:** Interconnection

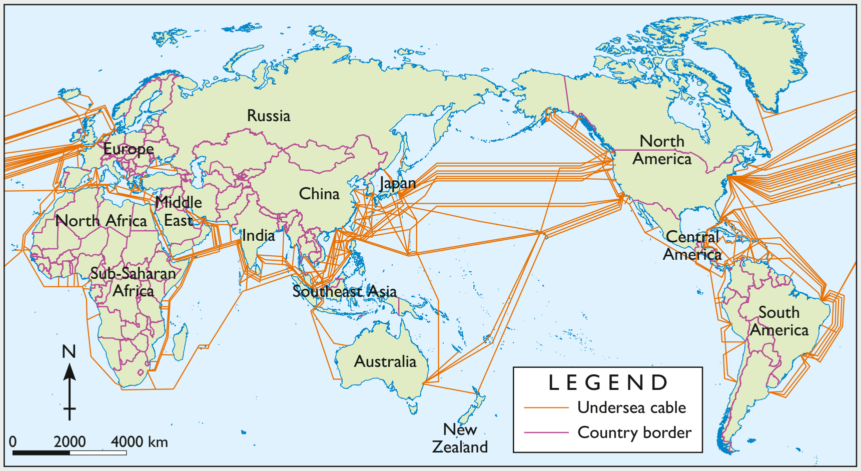
How submarine cables connect the world through communication

In the past, most countries used their own resources to feed and clothe their own populations. Today, however, all nations increasingly rely on each other to supply goods and services to their populations. We are more connected to the rest of the world than we have ever been before. This increasing interconnection between countries is referred to as globalisation.

Globalisation has increased rapidly over the last 50 to 60 years. In 2008, for example, the same amount of trade took place in one day as in a whole year in the 1940s. This increase is largely due to rapid improvements in information and communications technology (ICT) such as the Internet. Virtually all of the world's Internet connections are made through submarine cables on the ocean floors that link together the world's land masses. In total, there are about 885 000 kilometres of submarine cables around the world and the latest cables carry signals 12 000 kilometres across the Atlantic Ocean in 0.00072 seconds. The latest submarine cables are about the thickness of a garden hose but contain enough bandwidth for 20 million Internet users.

For more information on the key concept of interconnection, refer to pages 8–9 of 'The geography toolkit'.

WORLD: NETWORK OF SUBMARINE TELECOMMUNICATION CABLES



Source 2

Source: Oxford University Press

Check your learning 4.3

Remember and understand

1 How do the lines of John Donne's poem relate to the principle of interconnection? Do you think this poem is relevant to today's world? Why or why not?

2 In what ways do submarine cables connect different places around the world?

Apply and analyse

3 Write a list of some of the ways in which you link to other countries.

- **a** Share your links with your classmates and build up a class list of these links.
- **b** Show these links on a world map. You may need to develop a legend to show different types of links.
- **c** Describe the pattern shown on your class map.

4 Examine Source 2.

- **a** Which regions and countries are the most connected by submarine cables?
- **b** Which places are important hubs for submarine cables?

Evaluate and create

5 Re-write the section of John Donne's poem in your own words as a tweet. How many people would his poem have reached when it was published in 1624? How many people could the Twitter version reach? Describe how both the poem and the tweet are examples of interconnection.

4.4 How geographical features influence interconnections

The distribution of the world's land masses and physical features has always been a key factor in making connections between people and places easy or difficult. Some physical features, such as high mountain ranges, deserts and stormy seas, have been natural barriers to trade and communication for thousands of years.

Others, such as rivers and mountain passes, act as natural corridors for connecting people and places. All around the world, people have attempted to cut through mountains, build bridges over valleys, and even construct underwater tunnels to overcome some of the natural barriers that inhibit transport and trade.

The Khyber Pass: a natural corridor

Some of the world's greatest natural barriers are the massive mountain ranges of Central Asia including the Himalayas and Hindu Kush ranges. Transport links across the ranges are limited to a few high mountain passes. The most important of these is the Khyber Pass. Carved by mountain rivers and streams, the pass allows road and rail connections between Afghanistan and Pakistan. The pass is one of the world's most significant natural corridors and was part of the fabled Silk Road that linked traders in Africa, Europe and Asia from the 2nd century BCE to the 16th century CE. Military leaders such as Genghis Khan and Alexander the Great also used the Khyber Pass during their military campaigns.

Source 1 Narrow gorges near the Khyber Pass in northern Pakistan have acted as natural barriers to trade and communication.

skill**drill**

Interpreting false colour satellite images

You may have heard the term 'false colour' before. The term means different or exaggerated colours have been used or added to make an image easier to interpret. Satellite images have become one of the most useful tools available to geographers. They are taken from special cameras mounted in orbiting satellites and show a large area of the Earth's surface. While some satellite images are shown in natural colour, others are altered by computers and use false colours to highlight particular features. The cartographer or person working on the image applies colours that make the range of features easier to see or understand than they would be on a 'natural' photograph or satellite image. The colours used in a false colour image can be completely unrelated to the feature being highlighted – a forest may be coloured pink, for example.

This change to colour is done when the colours of the natural features are too similar to demonstrate a particular point or aspect clearly. If someone is trying to show where a muddy brown river meets a brown-coloured riverbank where there are brown rocks and some brownish shrubs, they might decide to use colour to clearly show where the different elements are. In that case, they might make the shrub areas green, the river bright yellow and the rocks a bright red, leaving just the riverbank brown.

When interpreting false colour satellite images, you should examine the accompanying legend if there is one to interpret the colours used in a false or simulated natural colour image.

Follow these steps to interpret a satellite image that uses false or simulated colour.

Step 1 Use an atlas to locate the area shown in the image on the Earth's surface.

Step 2 Compare the false or simulated natural colour satellite image with the map of the same area. Use the atlas to identify natural and human features of this environment.

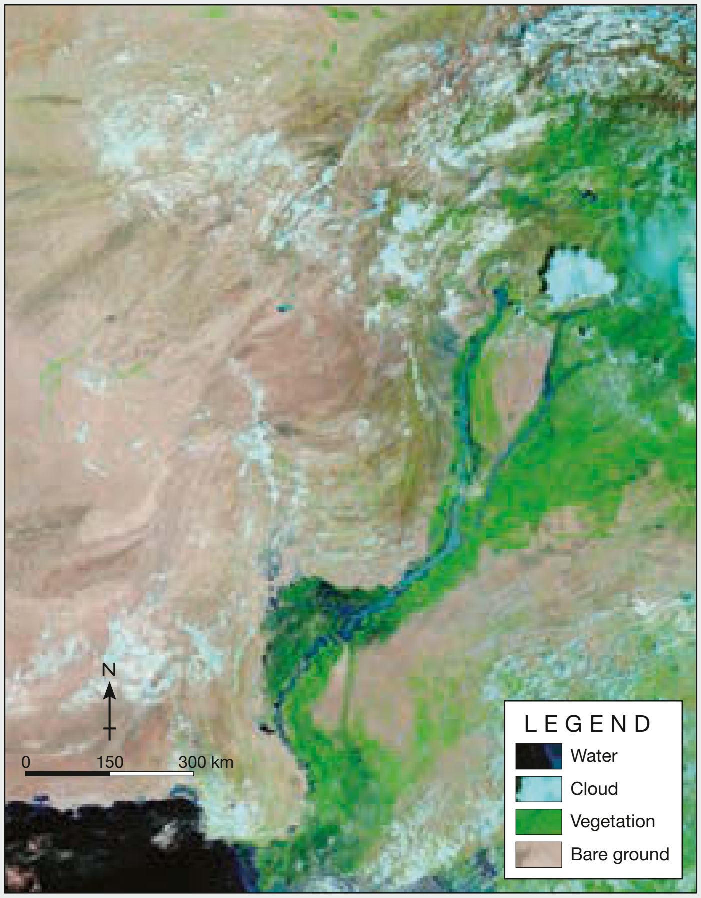
Step 3 Then look closely at the satellite image and, guided by the false or exaggerated colours, identify key features of the environment such as rivers, mountain ranges and valleys. Follow the legend on the satellite image if it has one and you are not sure at first what features you are looking at.

Step 4 Continue to compare the map with the satellite image to deepen your understanding of the area shown.

Step 5 Describe any relationships between features of the environment that you can identify on the satellite image. You can also use your atlas to help you add the names of features to your description.

Apply the skill

1. Find a map that shows the area around the Khyber Pass. Use it to help you describe the landscape around the Khyber Pass shown in Source 2.
2. Compare Source 2 with a map of the Khyber Pass. What geographical features do you think have made the Khyber Pass a significant feature of the region?



Source 2 This is a false colour satellite image of the Khyber Pass region with the Indus River in flood. The image uses exaggerated colours to make it easier to detect the various natural features in the area.

key**concept:** Change

Reopening the Northwest Passage

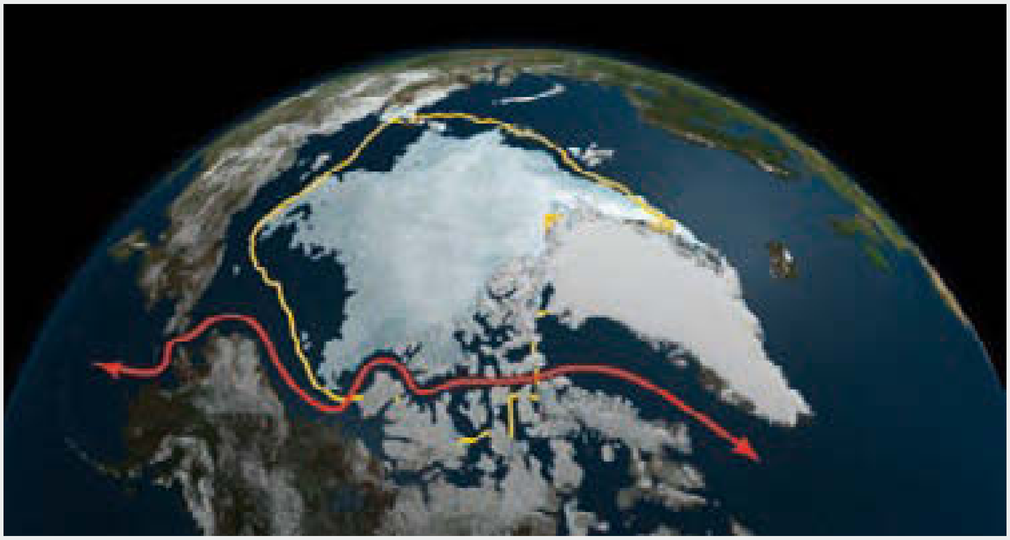
As the economies of the world become more closely linked due to globalisation, shipping companies are looking for ways to reduce the relative distance between trading countries. The Americas have always been a physical barrier between Western Europe and East Asia, two of the major trading areas of the world.

Before the completion of the Panama Canal in 1914, ships were forced to brave the dangerous waters around Cape Horn on the southern tip of South America. Today, around 40 ships a day pass through the Panama Canal but some large ships now exceed the size limits of the canal.

The preferred route for ships would be the Northwest Passage around the north of North America. However, the Arctic sea ice is unpredictable and hazardous, even in summer when much of the ice covering the Arctic Ocean melts.

Climate change, however, is now opening up the Northwest Passage. Each year the sea ice shrinks by about 70 000 square kilometres, and many researchers now believe that the passage could be completely ice-free all year within decades. Many shipping companies around the world won't wait that long, however, and have begun building ships that can withstand the reduced Arctic sea ice.

For more information on the key concept of change, refer to page 10 of 'The geography toolkit'.



Source 3 NASA satellite data in 2011 showed that Arctic sea ice had retreated to a level far smaller than the 30-year average (marked in yellow), opening up the Northwest Passage shipping lanes (in red).

Check your learning 4.4

Remember and understand

1 Where is the Khyber Pass and why is it important?

2 What are the similarities between the Khyber Pass and the Northwest Passage?

Apply and analyse

3 Describe the relationship between sea ice and shipping shown in Source 3. Use the correct names of seas and countries in your description.

Evaluate and create

4 Use an atlas to examine the area between Tokyo, Japan and London, United Kingdom.

  a Estimate the distance a ship would sail between Tokyo and London if passing through the Northwest Passage compared to the Panama Canal.

  b Container ships travel at about 40 kilometres per hour and use about 200 tonnes of fuel a day. Estimate the savings in time and fuel for a Tokyo–London ship using the Northwest Passage.

5 Research other natural barriers and corridors to trade such as deserts, rainforests and rivers. Make a list of these and locate them on a world map. How have new technologies helped to overcome natural barriers?

4.5 How people influence interconnections

Geographical features, including both natural and artificial structures, can pose many challenges for humans and their activities. Trade in particular, has been affected for centuries by physical geographical barriers. Among these are rivers, mountains, forests and deserts. Exploration and building efforts have often been directed at building bridges, tunnels, canals and other structures to close the gap between places and increase the level of interconnection between places.

Some geographers believe that the greatest barriers to connections between people and places are not caused by physical features such as oceans and mountain ranges but by human activities and decisions.

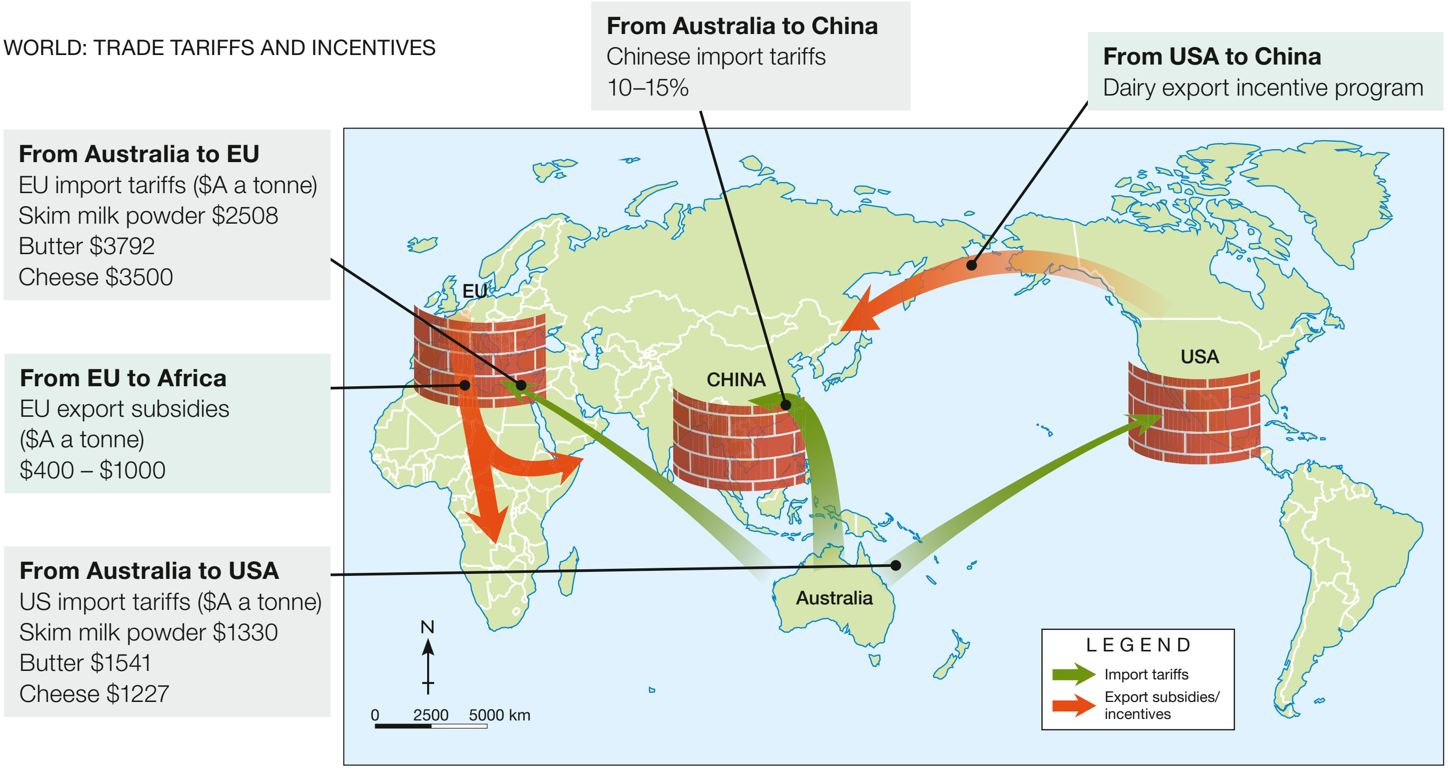
For example, there are many barriers put in place to limit and control the movement of people and goods across international borders (e.g in the way of taxes and **tarrifs**). These exist to protect the interests of individual countries but the end result is often a restriction on trade and communications.

Economists have estimated that removing trade barriers would add about $168 billion to the world economy every year. The biggest winners in the removal of these barriers would be people in developing countries as the price of food would fall and they would find it easier to export goods they produce.

Tariffs and non-tariff barriers

To protect local industries, governments in many countries impose a tax, known as a tariff, on imported goods. They also restrict trade by imposing import limits on some goods, and negotiate complicated trade agreements with other countries. Australian farmers often face trade barriers when trying to export their goods (see Source 1). Many countries apply tariffs to imported goods, while also providing incentives such as lower taxes to their own farmers to help them export their goods.

WORLD: TRADE TARIFFS AND INCENTIVES



From Australia to China
Chinese import tariffs
10–15%

From USA to China
Dairy export incentive program

From Australia to EU
EU import tariffs ($A a tonne)
Skim milk powder $2508
Butter $3792
Cheese $3500

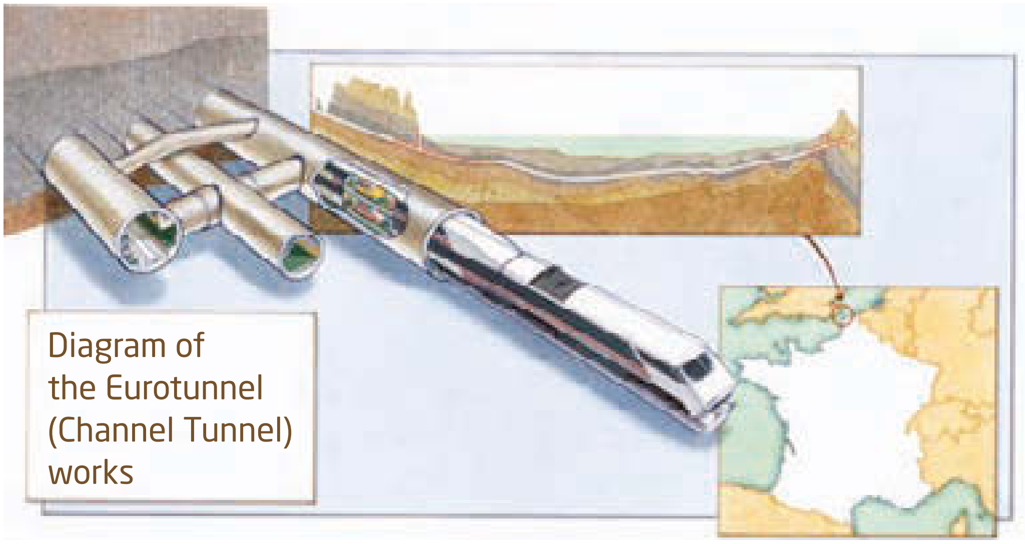
From EU to Africa
EU export subsidies
($A a tonne)
$400 – $1000

From Australia to USA
US import tariffs ($A a tonne)
Skim milk powder $1330
Butter $1541
Cheese $1227

Source 1

Source: Oxford University Press

While these official procedures can be a barrier to free trade between countries so, too, can unofficial practices such as bribery and corruption. Imagine, for example, ordering the same product to be delivered to your home in Australia from two different places: one from the United States and one from Sub-Saharan Africa. Both suppliers pack the goods into a shipping container and contact the shipping company on the same day. Six days later, your container leaves the port in the United States and starts on its journey to you. The African container takes six times longer to pass through the port and reach a ship and you will pay twice as much to the port officials. Though labour costs are much lower in Africa, your extra money has been used to pay bribes to the shipping agent, customs officials, security agents, drivers and crane operators to keep your container moving through the system.



Source 2 The construction of the Channel Tunnel was a massive undertaking to bridge the physical barrier of water between France and England (known as the English Channel). The works took a total of seven years.

Source 3 The port of Maputo, Mozambique. Corruption, in the form of bribery, added 14 per cent to shipping costs and increased the salary of some port officials at Maputo by 600 per cent.

Case study: the tunnels of Gaza

The city of Rafah in the Middle East lies across an international border. The southern part of the city lies in Egypt while the north is in the Gaza Strip, a Palestinian territory. The neighbouring country of Israel, concerned that guns and ammunition are passing from Egypt into Gaza, maintain tight control of the border in Rafah.

The people of the city have responded by digging an extensive network of tunnels beneath the border to connect the two sides of the city. Up to 15 000 people were involved in digging the tunnels which are used to smuggle virtually everything that people and the government need. Machinery, livestock, fuel and steel pass through the tunnels daily. The political party that controls the Gaza Strip even taxes the goods that pass through the tunnels and are rumoured to raise as much as $750 million a year in this way. Some people living in Gaza even boast that they can order fast food from Egypt and have it home delivered!

Source 4 A flock of sheep is driven through a tunnel beneath the streets of Rafah.

Check your learning 4.5

Remember and understand

1 In what ways can trade and communications be restricted between countries?

2 Why do countries restrict connections in this way?

Apply and analyse

3 Imagine that you have ordered goods from Africa and the United States and they were delivered as described above.
   - a How would your experience change the way in which you make purchasing decisions in the future?
   - b Who suffers and who benefits from your decision?
   - c Imagine that Maputo is the only place from which you can buy the goods you need. Brainstorm some ways in which you could receive your goods more cheaply and quickly.

4 Examine Source 1. What are some of the restrictions placed on Australian farmers exporting their produce? Use the names of specific products and places in your answer.

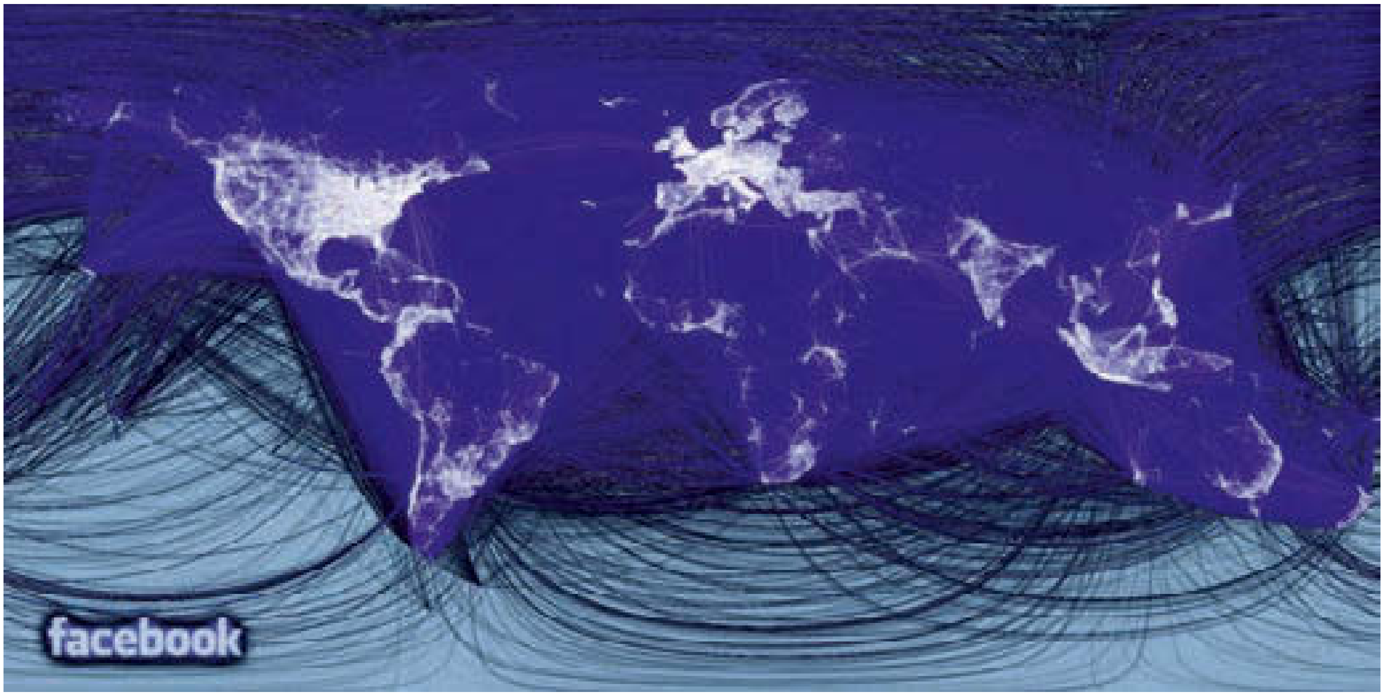
5 Why do the people of Rafah dig tunnels? What would be some of the risks in digging and using tunnels such as these?

Evaluate and create

6 Use Google Earth to explore the city of Rafah. Describe the border region and any differences you can identify between the two parts of the city.

7 Examine Source 2. Do some extra reading on the Internet and then write two to three paragraphs outlining the reasons for building the tunnel and the challenges that were encountered.

4.6 How technology influences interconnections



Source 1 This map of the world was created not by drawing borders, but by marking the connections between 10 million Facebook friends.

The Internet allows people to connect with other people in different places more quickly and conveniently than ever before. Today, we use the Internet for a range of activities and purposes that link us to many places all over the world. Your after-school activities are probably connecting you to places all over the world without you even realising it. In the space of half an hour sitting at the computer, you might have logged into Facebook, connecting with friends who live in the same area, others who live interstate or some who live in another country. You might listen to some British or American songs on YouTube while you do your homework, or stream an international sports game. The Internet allows you to make all these connections to different places without physically leaving your desk.

Communicating with people in different places

We use the Internet to play games, to shop, plan activities, find directions, read, research, complete homework and more than ever before, to communicate with each other.

Using the Internet for emails remains the most popular activity with 98 per cent of people online having sent an email in the last 12 months. The Internet has, in many ways, become the most dominant form of social interaction on the planet.

- There are 2.1 billion Internet users in the world and 3.1 billion email accounts.
- About 250 billion emails are sent every day.
- There are about 100 million active Twitter users sending 250 million tweets a day.
- There are more than 1 billion Facebook accounts. This is greater than the total world population 200 years ago.
- Every minute a further 48 hours of video content is added to YouTube.
- There are more than 500 million Google searches made every day. This rate has doubled in the last three years.

Access to news and information

Developments in information and communications technologies (ICT) have meant that people can now access a wide range of global news and information services quickly and easily. You can get American basketball scores in real-time, for example, or you can see photos from a collection at Paris fashion week on the same day it is shown. This information might be trivial, such as finding out what everyone was wearing at last night's music awards, or it might be something that could potentially save a life.

During the Black Saturday bushfires, which swept through Victoria in 2009, many people were alerted to the threat via social media, not by traditional news forms. Following Twitter allowed people to get real-time updates from others who were tweeting from areas nearby the flames, information that traditional news services did not have access to. You may be able to think of other examples where Twitter or other social media have broken stories before traditional news providers.

Access to services in other places

Do you watch your favourite programs on free-to-air TV or do you prefer to live-stream or download? Do you prefer to shop for clothes online or do you go and try things on in a store before you buy?

Entertainment and shopping are two areas of your life where information technology connects you to other places on a regular basis. You probably take it for granted that you can download new music the same day it is released in the United States. In the past, you would have had to wait for CDs to arrive in shops here. You can also shop online, and often purchase things more cheaply than if you were buying them in a physical store. Almost $8 trillion a year changes hands through e-commerce, and half of all Australians have shopped online in the last three months. Access to services and goods in other places is an aspect of globalisation that many of us now enjoy as a matter of course.

Case study: offshore call centres

When people call up to complain about mobile phone service, book an airline ticket, or pay a bill, chances are they speak to someone in the Philippines or India rather than in Australia. Many Australian companies have moved their call centres to these other countries to take advantage of the lower wages. The call centre industry, which currently employs around 400000 Filipinos and 350000 Indians, is expected to grow quickly as Internet speeds increase and new companies take advantage of the cost savings.

Source 2 Developments in technology and increased Internet speeds mean that it is possible for overseas companies to use call centres in India or the Philippines.

Check your learning 4.6

Remember and understand

1 In what ways do you think an online news service might be more useful than a traditional television or print-based news service?
2 Name three ways that the Internet facilitates interconnections between people in different places.
3 How are offshore call centres an example of interconnection?

Apply and analyse

4 Compare the Facebook map shown in Source 1 to an atlas map of the world.
  a Name six countries that are very active Facebook users.
  b Name four countries where there appears to be relatively little Facebook usage. Suggest some reasons for this.
  c Describe the pattern of Facebook usage in Australia.
5 Do you use online shopping for any purchases? If so, which items do you tend to buy online? Do you know where the items you purchase are coming from?
6 In what ways does online shopping affect:
  a the consumer?
  b the environment?
  c local shop owners?
  d postal and delivery service providers?

4.7 Digital access around the world

The digital divide

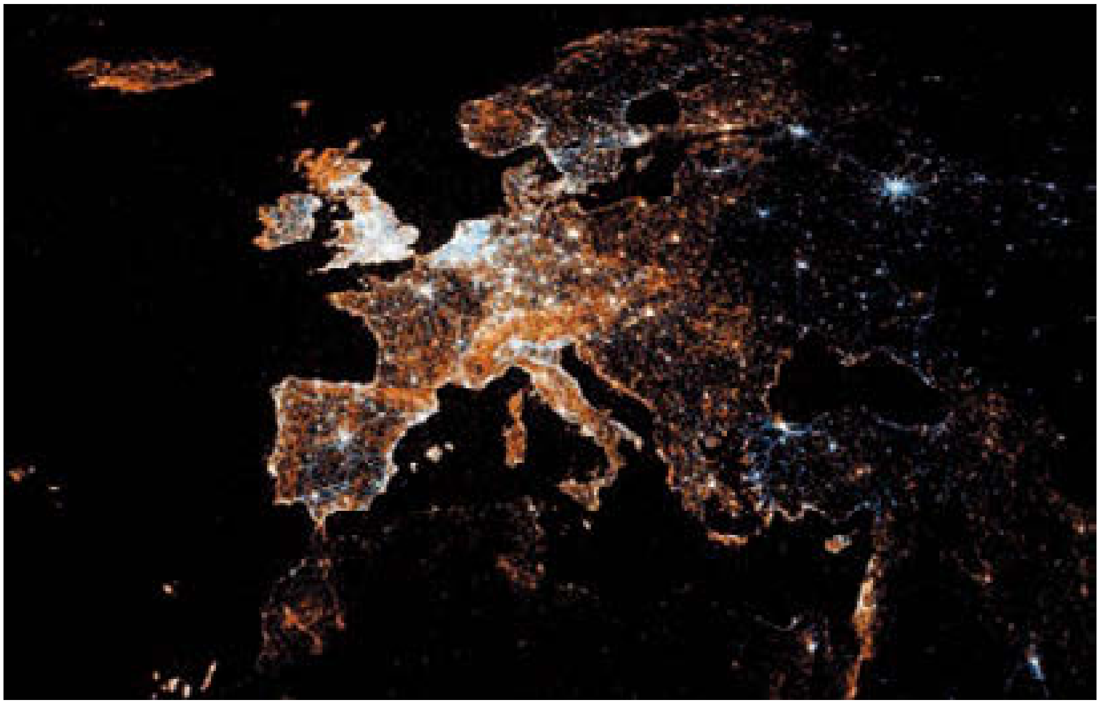
During your lifetime, the Internet and other digital technologies have become the most powerful tools of connection the world has ever known. As a result, many experts argue that we are currently experiencing a digital revolution. In many places it now seems easier to be connected to other people and places than not to be. However, this high level of connection is not experienced equally by everyone. In some places there are more computers and mobile phones than there are people, while in other places these devices are still uncommon. These differences are known as the **digital divide**.

Using indicators such as the number of mobile subscribers, the price of Internet access, adult literacy, bandwidth and the number of Internet users, organisations such as the International Telecommunications Union (part of the United Nations) award each country a score based on its level of digital access (see Source 3). The lighter the shade of green, the greater the digital access enjoyed by that country. The darker the shade of green, the more limited the digital access.

Digital access in developing nations

While access to communication technologies is greatest in developed nations the rest of the world is beginning to catch up. The people in the Sub-Saharan African nation of Niger, for example, are identified in Source 3 as having the least access to ICT. In 2000, only one resident of Niger in every 5000 had a mobile phone subscription. By 2013, this had become one in every three.

For many people in developing countries, the Internet and mobile phone have become a way to access the promise of a better future for themselves and their children. This promise grew following large-scale protests against governments in many Middle Eastern and North African countries that began in 2010 and resulted in the overthrow of several governments. Known as the Arab Spring, it showed the power of social media, as people used sites such as Facebook and Twitter to organise protests and broadcast acts of violence by the police and armed forces.

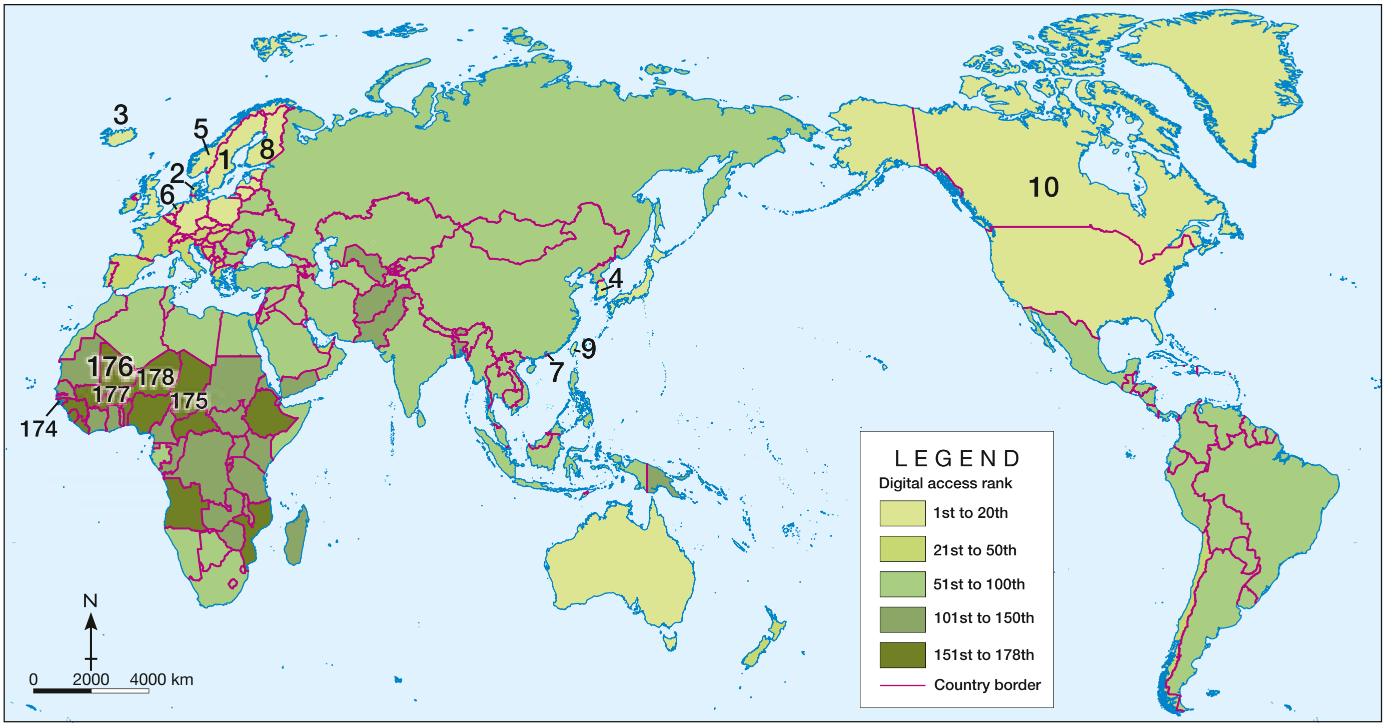


Source 1
This amazing image uses the digital traffic created by the social network site Twitter and the photo-sharing site Flickr to map the use of digital technologies in Europe and North Africa. The red dots show places where Flickr pictures are uploaded and the blue dots where tweets were sent. White dots are locations that produced posts to both websites.

Source 2 This data is from the International Telecommunications Union, a specialised branch of the United Nations, and shows the developing rates of mobile and Internet use in developed and developing nations as a percentage of the population.

		2005	2006	2007	2008	2009	2010	2011	2012	2013
Mobile phone subscriptions	Developed	82.1	92.9	102.0	108.3	112.5	115.0	119.0	123.6	128.2
	Developing	22.9	30.1	39.1	49.1	58.3	69.0	78.3	84.3	89.4
Homes with Internet	Developed	44.7	48.2	53.4	57.7	62.6	66.3	70.2	74.0	77.7
	Developing	8.1	9.6	11.2	12.5	14.1	16.4	20.2	24.0	28.0
People using the Internet	Developed	50.9	53.5	59.0	61.3	62.9	67.3	70.5	73.4	76.8
	Developing	7.8	9.4	11.9	14.7	17.5	21.2	24.5	27.5	30.7

WORLD: LEVELS OF DIGITAL ACCESS



Source 3

Source: Oxford University Press

Check your learning 4.7

Remember and understand

1 What is meant by the 'digital divide'?

2 What are some of the likely consequences of this divide?

Apply and analyse

3 Examine Source 3.
  a Describe the distribution of those countries with very high digital access.
  b Describe the distribution of those countries with very low digital access.
  c Account for the differences in digital access as shown on this map.

4 Examine Source 2 and describe the general pattern of changes in digital access in developing countries.

5 Examine Source 1 and compare this to a **political map** of the same region.
  a Which countries send the most photos and tweets?
  b Which countries send the least?
  c Account for the spots of white in areas of darkness.
  d How does this map reflect physical features such as oceans, mountains and deserts?
  e How does this map reflect human features such as cities, wealth and **population density**?

4.8 Connecting with remote areas

While many of us live or spend most of our time in towns or cities, there are significant numbers of people who live in, or travel to, more remote areas. In the past, the physical distance that separated places posed significant issues, even risks. Alerting someone located in a remote area of an incoming violent storm, for example, may have been difficult, even impossible. Even now, restricted mobile phone coverage and slow Internet access can still make connecting with some places decidedly challenging.

People travel to remote places for many reasons. There are scientists who go out into the field to research and explore, religious missionaries or educators who might visit or do short stays in an area to help or teach a language, and those who simply want to tackle the frontiers of places that are still relatively unchartered. Here, we will look at how people who travel to remote areas as well as how those who live in such places interconnect with the world.

Changing the ways explorers interconnect

Antarctica is the most remote place on Earth. Explorers in the 1900s, such as Robert Falcon Scott and Ernest Shackleton, effectively disappeared once they sailed away from their last port in New Zealand or Argentina. Their families and supporters knew that it would be years before they would see them again.

Communication with the 'outside world' was simply not possible. This was the case throughout many remote places on Earth, including vast areas of inland Australia, until only recently.

Explorers still travel to Antarctica and although this extreme environment is as challenging as ever, they are no longer as isolated. In 2012, British adventurer Felicity Aston skied alone for 1477 kilometres across Antarctica, becoming the first woman to do so (see Source 1). Among the equipment she carried in the two sleds she dragged behind her were a satellite phone that gave her coverage for the complete 59-day journey and a solar panel to recharge it. Connecting to a series of satellites orbiting the Earth 780 kilometres above her allowed Felicity to chat to family and friends, make a daily safety call, take part in live radio interviews, maintain a blog and Facebook page and tweet to hundreds of thousands of followers daily.

Source 1 Alone but connected: Felicity Aston sets off across Antarctica.

Source 2 This picture shows the positions of the 6000 artificial objects currently orbiting the Earth. Note that they are shown as much larger than their actual sizes.

The technologies that allow people in remote places to connect to other places all rely on a system of satellites that orbit the Earth. These receive signals from devices such as satellite phones and bounce them back to Earth or to another satellite. There are about 6000 of these satellites currently in orbit and this number increases by about 200 a year. These are used to relay messages to devices you probably have in your home, such as televisions and GPS receivers.

Connections in the outback

Source 3 The Internet is providing connections in remote places where there was previously little contact with other communities.

Australia is one of the world's largest countries and some people live vast distances from the goods and services they need. This has resulted in unique problems that require unique solutions. The Royal Flying Doctor Service and School of the Air, for example, have helped to bring medical services and schooling to some of the world's most remote communities.

The Northern Territory Aboriginal community of Mungalawurru lies 90 kilometres north-west of Tennant Creek. In 2011, there was little contact between the community and people in other places. There were no home phones or mobile phone coverage and the pay phone was usually out of order. This situation is typical of many remote communities but an experiment in Mungalawurru may be about to change connections in the outback forever. Since 2011, a partnership between several technology providers and social researchers has seen computers with Wi-Fi and satellite connections installed in most homes, and education given to the local community about their use. Within months they became widely used, particularly for music downloads, online banking and emails.

Check your learning 4.8

Remember and understand

1 Why do some people travel to remote areas?

2 How are explorers in Antarctica able to connect to people in other places? How does this differ from explorers in the past?

Apply and analyse

3 Research shows that the percentage of people in Australia who are connected to the Internet declines the further away people are from the centres of Australia's largest cities. Use a key geographic concept to explain why this is the case.

4 How do you think the new technology in Mungalawurru will change this community?

5 Have you ever lost your phone or had the Internet drop out at home? How did you feel, or how do you think you would feel if you lost your usual access? Discuss how your life would change if all systems of digital communication such as mobile phones and the Internet were cut. Consider how you would overcome any problems this might create for you.

6 What factors might you need to consider if you were to travel to an area that had limited mobile network coverage? What things might you need to pack or prepare that you would not normally have to consider?

Evaluate and create

7 Examine Source 2 in light of the issue of waste management. Research the amount of space junk that is currently in the atmosphere.
   a What problems could having so much space junk floating unregulated in the atmosphere cause in the future?
   b Are there any ways you think this should be addressed or strategies that you think should be implemented to tackle this potential problem?

4B rich task

How the Internet connects you to the world every day

Over a short period of time, we have come to rely on the Internet to connect us to the world in many ways throughout our day. We use it to play games, shop, research, find directions, work, read books, plan activities, complete homework and, more than ever before, to communicate with each other.

Some of the ways in which we use the Internet every day include:

- online banking
- downloading podcasts and apps
- finding out sports results
- playing online games
- sending or reading email
- streaming music, movies and TV programs
- getting news updates
- checking weather reports
- buying clothes, groceries and presents
- completing and submitting homework.

Source 1 Many people today would feel lost without the Internet.

skill**drill**

Conducting a survey and presenting the results

Geographers use surveys to explore people's opinions, ideas and activities. By analysing the results they can gain valuable insights into personal and social behaviour. The key to finding useful information from a survey is asking the right questions. Try to ask closed questions (yes/no questions or questions that provide a limited selection of options to choose from) as much as possible. Closed questions in surveys are commonly multiple-choice and ask people to choose their reply from a set of answers that you provide. Open questions (a question that doesn't give options to select from but encourages an individual's own thoughts to be expressed) are sometimes important too, but because you may receive a huge range of replies you may not be able to use the data so easily. Follow these steps to design a survey and present the results.

Step 1 Decide on the focus of your study.

Step 2 When you have decided what your study will be about, work out what information you are interested in finding out. For example, your study might be about the Internet, and you may want information on how often people use it.

Step 3 Decide which people you will survey. You will need to talk to at least 10 people to get data you can report on. Make sure that you have enough forms for all of the people you intend to survey. The more people you survey, the more useful and reliable your results will be.

Step 4 Write a series of closed questions about your study. A closed question might look like this:

How often do you use the Internet at home?

At least once a day ☐
At least once a week ☐
At least once a month ☐
No Internet at home ☐

Step 5 Once you have your questions written, go over them to ensure that they are all focused on the subject of your study and are geared to find out the information you want. Make sure they are clearly worded and cannot be misinterpreted by people completing the survey. Ask a friend to read over your questions if you are unsure.

Step 6 Conduct your survey. Ask the questions and fill in the forms yourself, or you can get your participants to fill them in. Make sure the responses have been entered correctly and that you have accurate records.

Step 7 Once you have completed your surveys it is time to put the results together into a form you can use – this is called data analysis. This is often best done in a table like the one shown here.

Source 2 Data can be presented in a visual format like a table so the researcher can access information quickly and easily.

How often do you use the Internet at home?	Number	Percentage (%)
At least once a day	14	58.3
At least once a week	7	29.1
At least once a month	1	4.2
No Internet at home	2	8.4
Total	24	100

Step 8 Present your survey results in a way that makes them easy to understand. Rather than a lot of numbers and writing, use graphs. Make sure you clearly label each graph with the question you asked and below each graph write a short summary of the results.

Apply the skill

1 Design and complete a survey about the ways in which people in your class and members of your family use the Internet. Include a minimum of 10 questions. Survey a minimum of five classmates and five family members (or other people you know outside of class). You might want to include questions like:

Do you watch television shows online?

Yes ☐

No ☐

If yes, how many hours a week would you watch on average?

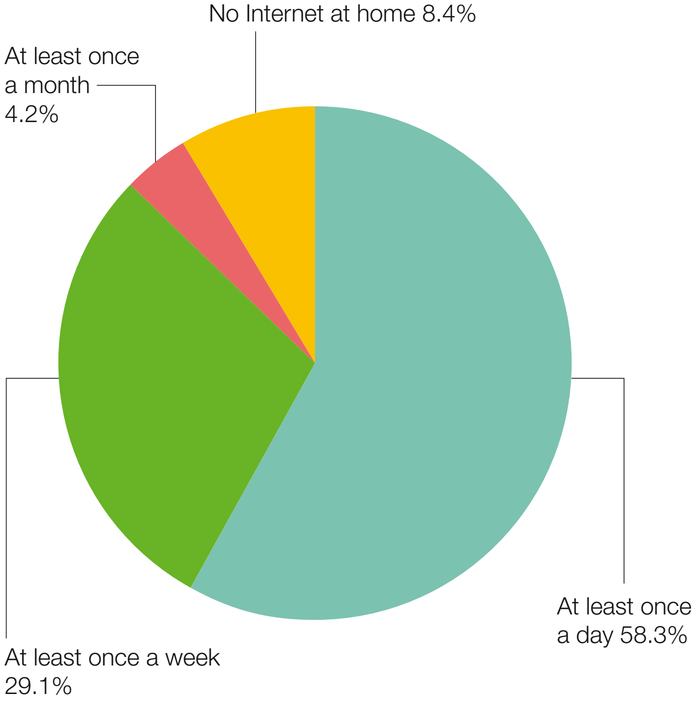
0–2 hours ☐

2–6 hours ☐

6–10 hours ☐

10 hours or more ☐

2 Once you have completed the survey, analyse the results and present them in table and graph formats.



More than 90 per cent of the people in my class have access to the Internet at home. More than half the class use it at least once a day.

Source 3 How often do you use the Internet at home?

Extend your understanding

1 Compare your findings with those of a classmate. Write a report based on both sets of results explaining how often and in what ways you used the Internet.

2 Present the results of your study to the class. Use your table or graph from the previous question as a visual aid, and talk through the most popular websites that people used, as well as the differences or similarities between the ways your family members and classmates used the Internet.

4.9 Global trade connections

Source 1 This is the world's second largest cargo plane. It can carry 150 tonnes of cargo over 3000 kilometres.

In the last 50 years or so there has been an explosion in the amount and value of goods traded within and between nations. When your grandparents were your age they probably ate food grown and processed in their local area. Most of their clothes were probably made locally, and they most likely bought things they needed from local shops. Communication with other places in the world would have come through the letterbox.

Today, homes contain many items made in other countries and we tend to shop globally. Today, trade between nations is valued at about US$18 trillion a year and international trade links people and places around the world. To make these connections there are:

- approximately 6000 planes in the air right now
- approximately 17 000 cargo ships crossing the world's seas and oceans
- pipelines transporting gases, oil and water a total distance of about 2 million kilometres
- more than 1 million kilometres of railway track.

The global flow of trade

Source 3 shows the amount of trade that flowed between the different economic regions worldwide in 2012. Imports and exports have a huge economic value for countries and the amount of trade taking place between countries grows bigger each year.

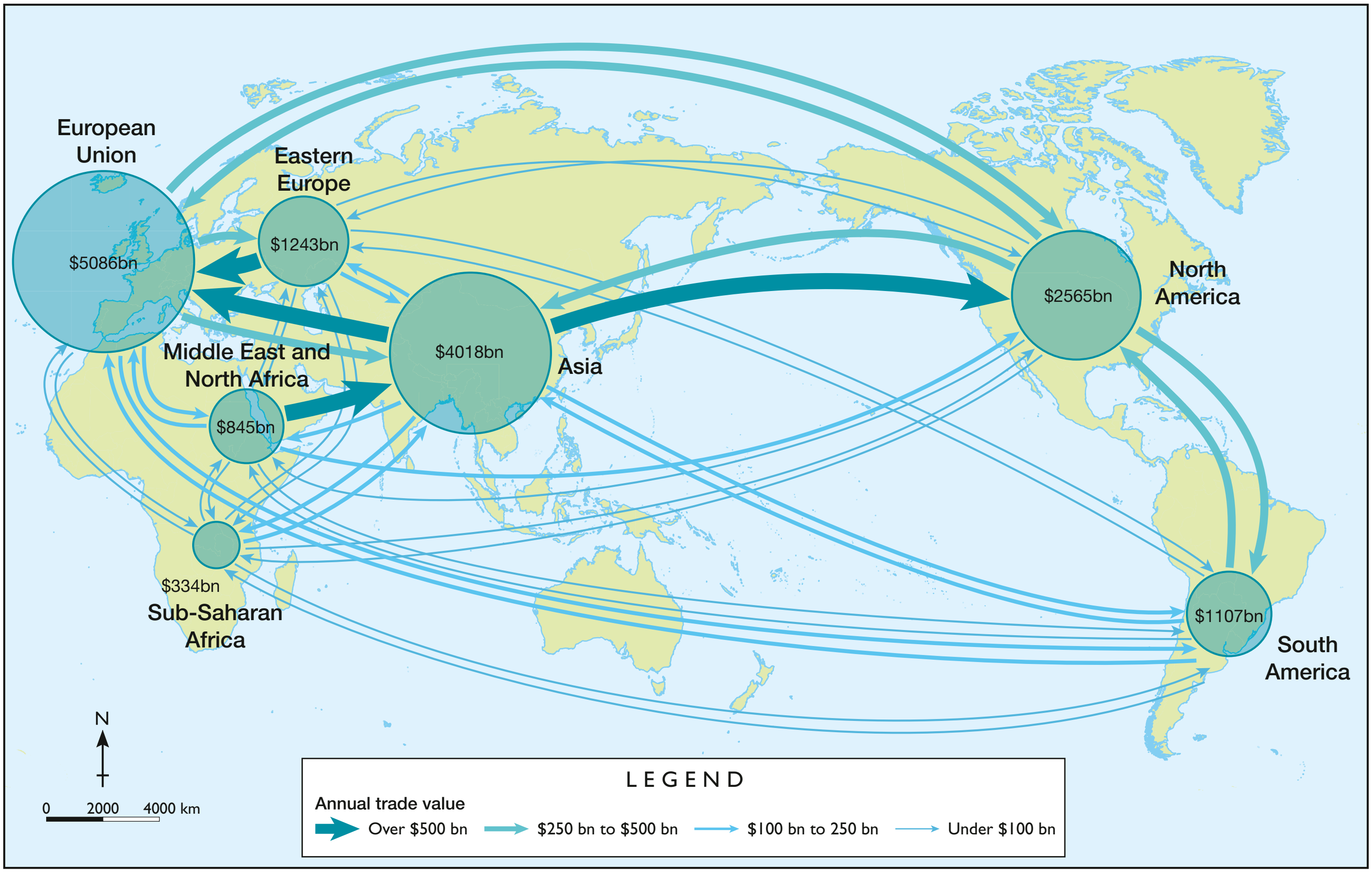
International trade is dominated by a few big players. The United States, Germany and Japan together account for about one-quarter of all exports and have done so for several decades. This dominance is threatened, however, by the rapid growth in emerging economies, particularly China, India and Brazil. In 2011, Brazil had record trade figures, with its exports market reaching around $US256 billion, and trade between India and China also grew to a record level of $US73.9 billion in the 2011–12 period.

Australia accounts for about 1.5 per cent of global trade and is ranked 21st in a list of the world's biggest exporters.

Source 2 Australia's top 5 import and export countries

Australia's top 5 import countries (% of total imports)	Australia's top 5 export countries (% of total exports)
1 China (18.2%)	1 China (28.8%)
2 United States (13.6%)	2 Japan (13.4%)
3 Japan (6.4%)	3 United States (7%)
4 Republic of Korea (4.5%)	4 Republic of Korea (6.3%)
5 Thailand (4.4%)	5 India (4.3%)

WORLD: GLOBAL FLOW OF TRADE IN 2012


European Union
$5086bn
Eastern Europe
$1243bn
Middle East and North Africa
$845bn
$4018bn
Asia
$2565bn
North America
$334bn
Sub-Saharan Africa
$1107bn
South America
N
0
2000
4000 km
LEGEND
Annual trade value
Over $500 bn
$250 bn to $500 bn
$100 bn to 250 bn
Under $100 bn

Source 3

Source: Oxford University Press

Check your learning 4.9

Remember and understand

1 How are most of the world's goods transported?

2 Which countries have dominated global trade in the past?

Apply and analyse

3 Examine Source 3.

  a Rank the seven regions of the world shown in the map, from the largest trader to the smallest.

  b Describe the destinations of exports from Asian countries.

  c Which region is the smallest exporter? Why do you think this is the case?

  d Which region exports much more than it imports? Why do you think this is the case?

Evaluate and create

4 Discuss with someone older than you (such as a parent or grandparent) about ways in which their links with other places have changed in their lifetime. Develop a set of questions about means of communication, travel, and buying goods and services to help in your discussion. Report back to your class about what you found out from your discussion.

5 Think of one product that you (or someone you know) recently bought over the Internet and one product bought from a local shop. Find out where each product came from and map the journey taken by each to reach you. To help in your task, you can look up shipping routes at http://www.sailwx.info and aeroplane flight information at http://planefinder.net/. You might want to research some local trucking or delivery companies too.

4.10 Australia's mining connections

Australia's mining boom

Australia is linked to many places in the world through the goods and services produced here that are exported to other countries. Over 60 per cent of our exports are minerals and fuels such as iron ore, coal, gold, crude oil and aluminium. In recent years, there has been a rapid growth in the amount of minerals exported from Australia (see Source 1). Known as the mining boom, this rapid growth is driven by three main factors. These are discussed below.

Increases in demand for Australian minerals from China and India

As China and India move from being rural societies to modern, urban and industrialised ones, they require vast amounts of raw materials. In particular, they need iron ore to produce steel for building projects. They also need a cheap source of energy, such as coal to generate electricity, needed to power homes and businesses. In the last few decades, Chinese industries have developed enormous factories producing goods such as machinery, ships and cars, all of which require steel made from iron ore. India has large reserves of iron ore but few coal reserves, whereas Australia has large quantities of both. This demand has seen a huge increase in the value of coal and iron ore.

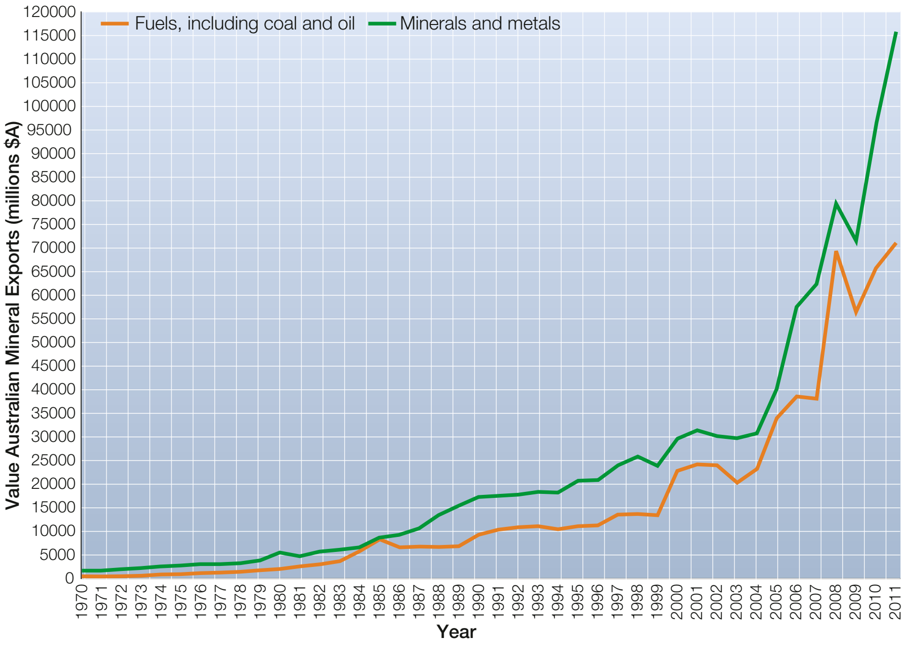
Australia's vast mineral wealth

Australia is one of the world's biggest suppliers of many metals and minerals used around the world. For example, Australia has the largest reserves of lead, nickel, silver, uranium, zinc and zircon on Earth.

Australia has the world's second-largest iron ore deposits – about 28 billion tonnes – almost all of which are located in Western Australia. It also has some of the world's largest coal deposits, which are used to provide about 80 per cent of our electricity. Large amounts of coal, mainly from the Bowen Basin in Queensland, are exported to Asian markets. Queensland has become the world's largest exporter of coal by sea.

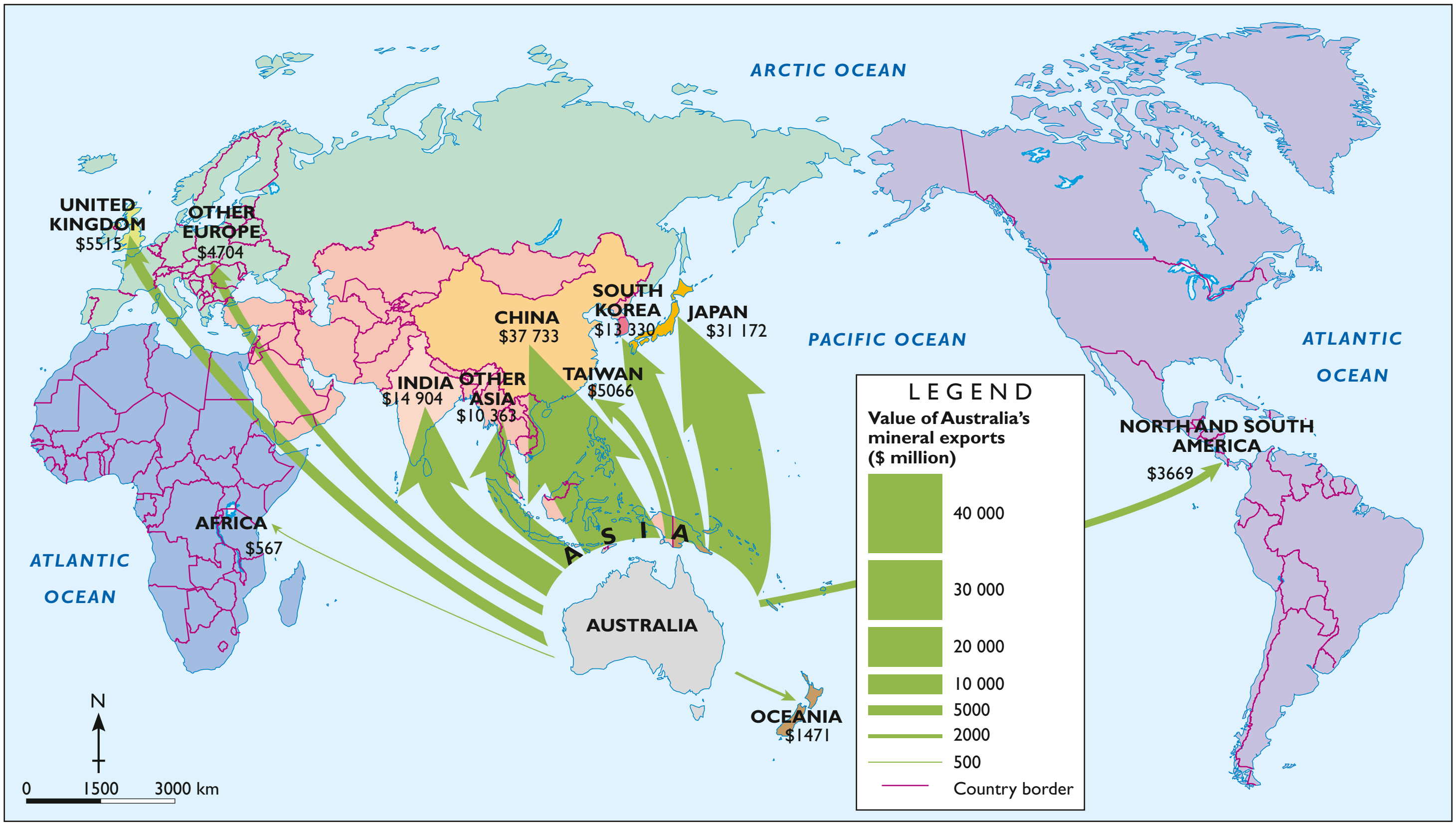
Australia's willingness and ability to export minerals

Since the 1850s, when miners began digging up gold in New South Wales and Victoria with picks, shovels and their bare hands, Australians have regarded minerals as a resource to be mined and sold. The mining sector is now Australia's largest export earner, accounting for nearly half of our total exports. Each day, about 1 million tonnes of iron ore leaves Australia on ships; this is expected to double within the next five years. Over 200 000 people are employed directly in the mining industry and they enjoy some of Australia's highest wages.



Source 1 Growth in Australia's mineral exports, 1970–2011

WORLD: VALUE OF AUSTRALIAN MINERAL: EXPORTS, 2010


ARCTIC OCEAN
UNITED KINGDOM $5515
OTHER EUROPE $4704
SOUTH KOREA $13 330
JAPAN $31 172
CHINA $37 733
PACIFIC OCEAN
ATLANTIC OCEAN
INDIA $14 904
OTHER ASIA $10 363
TAIWAN $5066
NORTH AND SOUTH AMERICA $3669
AFRICA $567
ASIA
ATLANTIC OCEAN
AUSTRALIA
OCEANIA $1471
N
0 1500 3000 km
LEGEND
Value of Australia's mineral exports ($ million)
40 000
30 000
20 000
10 000
5000
2000
500
Country border

Source 2

Source: Oxford University Press

Source 3 A gold mine near Kalgoorlie (now known as Kalgoorlie–Boulder) in Western Australia

Source 4 BHP Billiton is Australia's biggest privately owned business and the world's largest mining company. It operates mines in 25 countries and employs around 41 000 people. This ship is being loaded with iron ore at the BHP Billiton facility in Port Hedland, Western Australia.

Check your learning 4.10

Remember and understand

1. Why are coal and iron ore in such demand in China and India? What are they used for?
2. How have changes taking place in India and China resulted in changes in Australia?

Apply and analyse

3. Use the key concept of interconnection to explain Australia's mining boom.
4. Using Source 1, describe the growth in mineral exports since 1970.
5. Examine Source 2 showing the destinations of Australia's mineral exports.
   - a To which region do most Australian minerals go?
   - b What is the current value of Australian mineral exports to India? How and why might this value change over the next 10 to 20 years?
   - c Why do you think Japan imports so many of Australia's minerals?

Evaluate and create

6. Which individuals and companies benefit most from the mining boom?
7. Conduct research to discover how the mining boom might result in inequalities in wealth between different groups in Australian society.

4.11 Multinational companies

As you have learnt, one of the most common factors linking us around the world to people in different places is the movement of goods and services. In the last few decades, many large businesses based in wealthy developed countries have chosen to manufacture their goods in poorer developing countries. Because these businesses operate in more than one country, they are called **multinational companies** (**MNCs**). Some of the largest, most profitable and most recognisable brands in the world are produced by MNCs. These include Coca-Cola, Apple, IBM, McDonalds, Louis Vuitton, Adidas and Nike.

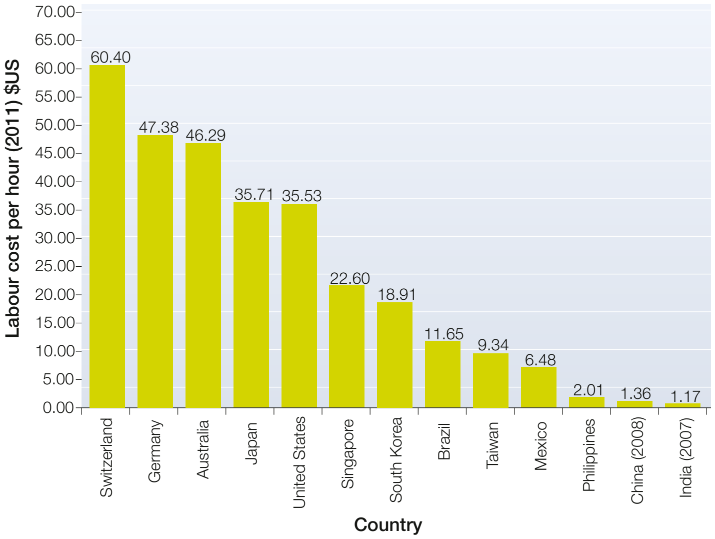
MNCs choose to base their manufacturing in developing countries for a variety of reasons, but the main one is cost. Labour costs are much lower in many of these countries (see Source 1) and this allows MNCs to spend less on manufacturing and thereby increase their profit.

Case study: Apple – a global giant

Apple is one of the world's largest and most profitable multinational companies in the world today with annual revenues of over US$150 billion. The company began in 1976 and at the time proudly boasted that all of its computers were made in the United States. Now virtually all of the 159 million products it sells every year are made outside the United States, mostly in China. While the cost of labour was a major factor in moving to China, other considerations were also important.

Virtually all of the components used in Apple products, such as glass screens and computer chips, are also made in China so it made sense to locate the assembly plant in the same place. Apple also found that Chinese plant owners and workers were much more flexible and willing to change than their American counterparts.

This is very important in a rapidly changing business such as electronics. The end result is that Apple can make an iPhone in China for about $8 in labour costs. The same phone would have labour costs of $73 in the United States.



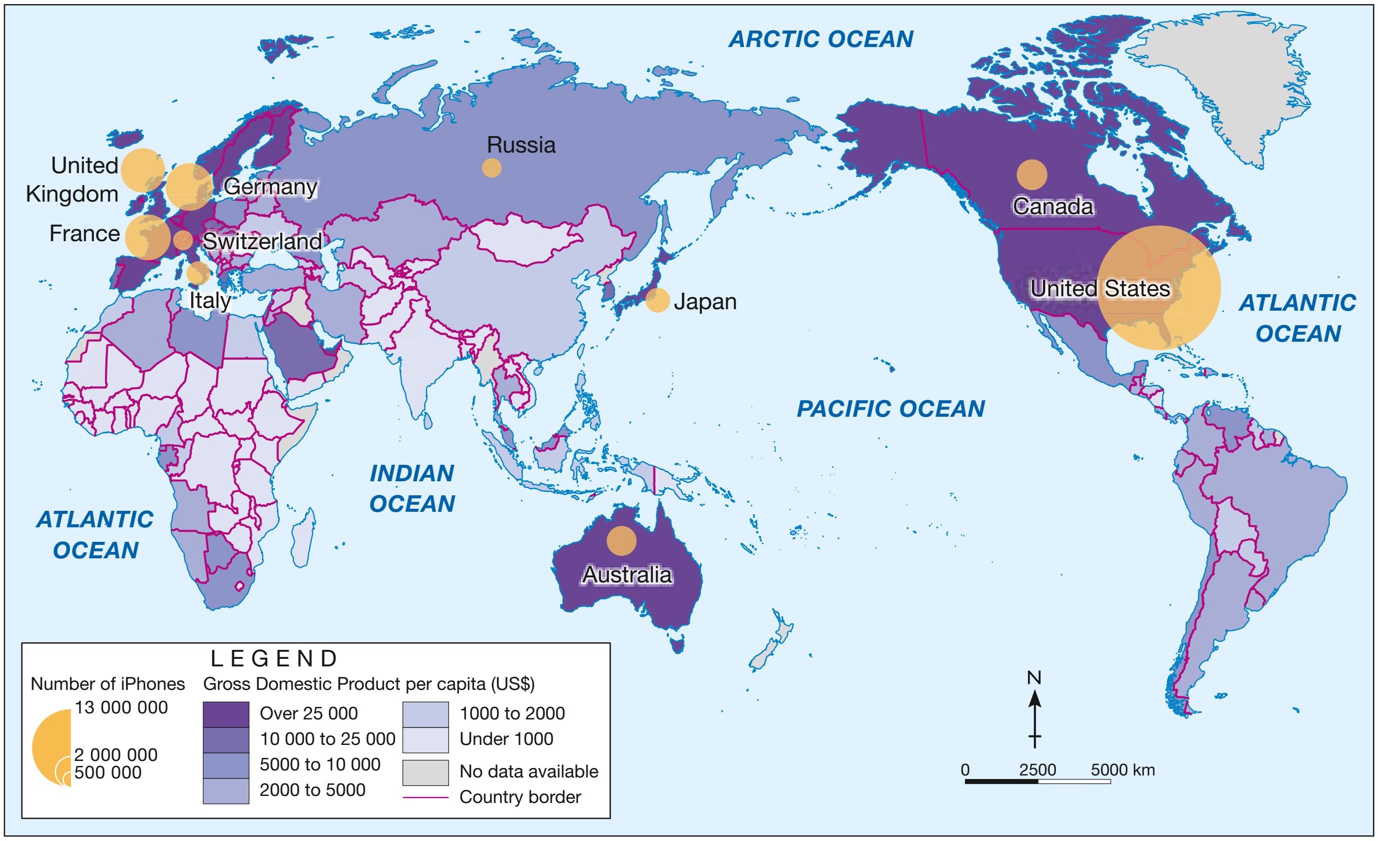
Source 1 Hourly rates of pay (including all benefits) for manufacturing workers in different countries

Source 2 Estimate of iPhone market share by country as at June 2009

Rank	Country	Estimated number of iPhones sold
1	United States	13 250 216
2	Germany	1 937 824
3	France	1 793 753
4	United Kingdom	1 682 491
5	Canada	805 594
6	Australia	762 161
7	Japan	525 658
8	Italy	490 451
9	Switzerland	334 649
10	Russia	326 458
	Other	4 490 745
	Total	26 400 000

Source 3 Thousands of Chinese job-seekers queue outside the Apple manufacturing plant in Shenzhen city, keen to become part of the global giant.

WORLD: GROSS DOMESTIC PRODUCT


ARCTIC OCEAN
Russia
United Kingdom
Germany
France
Switzerland
Italy
Japan
Canada
United States
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
ATLANTIC OCEAN
Australia
LEGEND
Number of iPhones
13 000 000
2 000 000
500 000
Gross Domestic Product per capita (US$)
Over 25 000
10 000 to 25 000
5000 to 10 000
2000 to 5000
1000 to 2000
Under 1000
No data available
Country border
N
0
2500
5000 km

Source 4

Source: Oxford University Press

Check your learning 4.11

Remember and understand

1 What is a multinational company?

2 Explain why Apple is described as a multinational company.

Apply and analyse

3 According to Source 1, which two countries pay workers the highest hourly wages? Which two countries pay the lowest? Why do you think this might be the case?

4 Why did Apple decide to move its manufacture of iPhones from the USA to China? Use evidence from Source 1 to support your answer.

5 Examine Source 2. What does this photograph tell you about the supply of labour in China?

6 Examine Sources 2, 3 and 4 and answer these questions.
   a In which Chinese city are iPhones made?
   b Where are iPhones sold?
   c What is the relationship between wealth (measured as **Gross Domestic Product**) and the purchase of iPhones?

7 Compare the Gross Domestic Product of the USA and China.

Evaluate and create

Complete some further research to do the following activity.

8 With a partner, discuss who benefits from the business activities of MNCs in different countries around the world. Consider consumers and the labour force in your discussion. Collate your ideas and report back to the class.

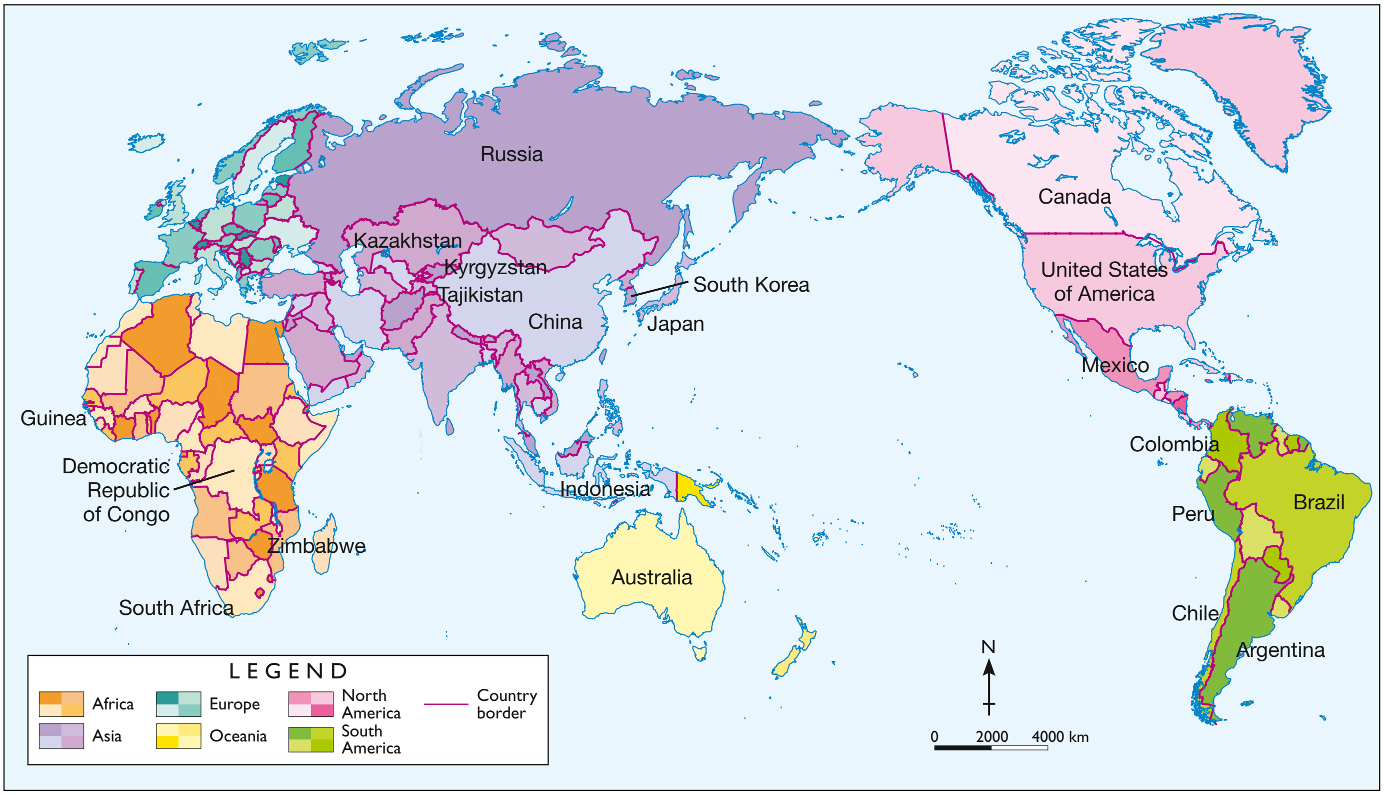
4.12 Global connections inside your laptop

Hidden inside many of the items that you use every day are bits and pieces from all around the world. A modern laptop computer, for example, contains materials and components from at least 20 different countries located on every continent except Antarctica. A complex series of networks and **supply chains** produce these components, transport them, process and assemble them, then package and deliver the finished laptop to a store near you.

Sources 2 and 3 show the locations of a range of materials used inside every laptop computer. The actual origin of each piece inside a computer is difficult to determine as manufacturers constantly change the source of their raw materials. This can cause problems for communities who rely on supplying these materials to provide employment and income.

Source 1 Virtually all of the world's laptops are assembled in Chinese factories owned by Taiwanese companies. In 2015, 286 million laptops were made in China.

WORLD: SOURCE COUNTRIES OF MATERIALS USED IN LAPTOPS


Russia
Kazakhstan
Kyrgyzstan
Tajikistan
China
South Korea
Japan
Canada
United States of America
Mexico
Colombia
Peru
Brazil
Chile
Argentina
Guinea
Democratic Republic of Congo
Zimbabwe
South Africa
Indonesia
Australia
LEGEND
Africa
Europe
North America
Country border
Asia
Oceania
South America
N
0
2000
4000 km

Source 2

Source: Oxford University Press

Source 3 Materials used in laptop construction and their country of origin

Country of origin	Materials supplied for laptop construction
Canada	Europium, aluminium
United States	Beryllium, palladium, phosphorus, silicon, copper, europium, boron
Mexico	Bismuth, silver
Peru	Indium, silver
Chile	Copper, arsenic
Brazil	Silicon, tantalum, niobium, aluminium
Argentina	Lithium
Colombia	Platinum, Guinea gallium
Democratic Republic of the Congo	Cobalt, tin, tantalum, titanium, gold
Zimbabwe	Lithium
South Africa	Chromium, gold, manganese, cadmium, platinum
Australia	Titanium, lead, nickel
Russia	Ruthenium, ferrite, steel
Kazakhstan	Vanadium
Kyrgyzstan	Mercury
Tajikistan	Antimony
Indonesia	Tin
South Korea	Glass, cadmium
Japan	Selenium, steel
China	Germanium, terbium, magnesium, rhodium, yttrium, plastics

The little pieces of Australia in every laptop

Australia is one of the most mineral-rich countries in the world. All laptop computers, for example, contain zinc, lead, gold and titanium, and Australia is among the world leaders in the mining of all of these minerals. The rocks near the town of Mt Isa, for example, contain some of the richest deposits of lead and zinc found on Earth. Settled in the 1920s, the town is now home to over 22 000 people – virtually all of whom rely on the town's mines for their employment and income.

Lead is mined and processed near the town. Lead ore is crushed and heated until it becomes a liquid so impurities can be removed in a process known as smelting. This process releases harmful gases and lead particles into the air. Recently some concerns have been raised that this is creating health risks for Mt Isa residents, particularly children. A study in 2008 found that 11 per cent of children tested had higher than normal lead levels in their blood.

Source 4 This lead mine at Mt Isa in north-west Queensland is one of the most productive in the world.

Check your learning 4.12

Remember and understand

1 Describe the interconnection between people in Mt Isa and the factory workers shown in Source 1.

2 Why are some people concerned about lead mining and smelting in Mt Isa?

Apply and analyse

3 Examine Source 3.

   a What is Australia's role in the production of laptop computers?

   b Most laptops are assembled in China. Imagine that each material used in the computer reaches China by ship. On a world map sketch the route taken by each material listed using the shortest sea route to southern China. Estimate the total distance travelled by these materials.

4 Why do you think most laptops are assembled in China?

Evaluate and create

5 Brainstorm the impacts of the laptop production process on people and the environment. Try to think of both positive and negative impacts.

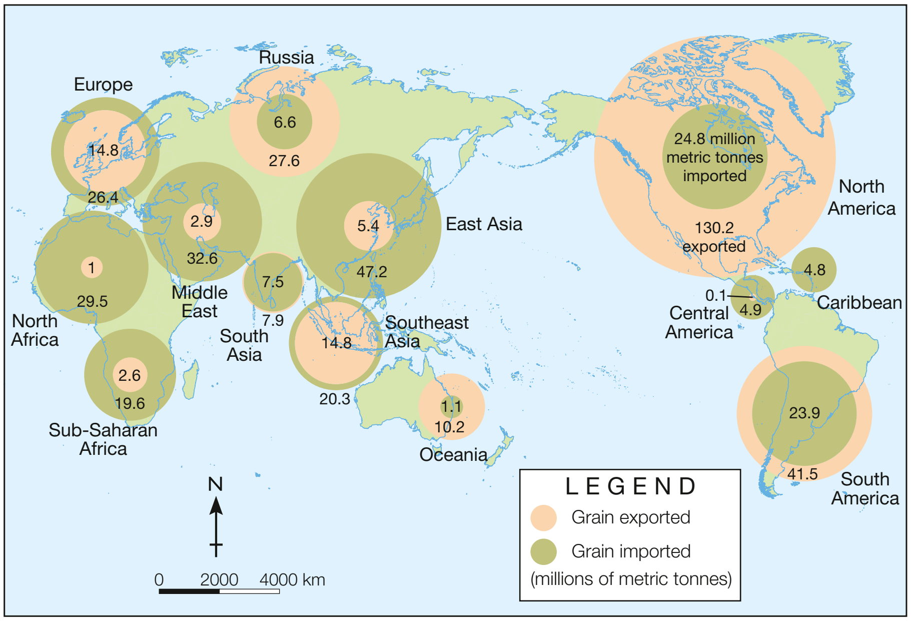
6 Research the mining of cobalt in the Democratic Republic of the Congo and write a short report on it including any impacts it has on people and the environment.

4.13 Connecting through food

Many countries around the world, including Australia, produce more food than they consume. As a result, some of that food is exported to other countries.

We can get an idea of the global connections made through food by looking at one type of basic food product and its movement around the world. Source 1 shows worldwide grain imports and exports over a year. Not all grain that is produced by countries is traded, in fact only a small proportion of the grain is. Only about 18 per cent of world wheat production and 10 per cent of maize production is traded globally.

WORLD: GRAIN IMPORTS AND EXPORTS


Russia
Europe
6.6
14.8
27.6
26.4
2.9
5.4
East Asia
24.8 million metric tonnes imported
North America
130.2 exported
1
32.6
7.5
47.2
4.8
29.5
Middle East
North Africa
7.9
South Asia
Southeast Asia
14.8
0.1
Central America
4.9
Caribbean
2.6
19.6
20.3
1.1
10.2
23.9
Sub-Saharan Africa
Oceania
41.5
South America
N
0 2000 4000 km
LEGEND
Grain exported
Grain imported
(millions of metric tonnes)

Source 1

Source: Oxford University Press

Advantages and disadvantages for Australia's food producers

Over the last few decades, governments around the world have begun to reduce trade barriers between countries and this has resulted in some advantages and some disadvantages for Australia's food producers and consumers. For example, consumers now have access to a wider range of foods from around the world. This has created business opportunities for food suppliers such as grocers and restaurants, as well as increased choice for consumers. On the other hand, Australian farmers now have to compete with other countries who may be able to provide produce at cheaper prices.

Australian farmers have responded to these challenges by producing food more efficiently, or by specialising in foods that are in high demand in other countries, such as organic foods. As a developed country, Australia also has the advantage of using innovations and new technologies in food production. Australia's proximity to Asia, with its large and increasingly wealthy markets, could also provide Australian farmers with new export opportunities.

key**concept:** Interconnection

Live animal exports

Most Australian meat that is exported to countries overseas comes from sheep and cattle that are killed in Australian abattoirs. Before export, the meat is processed, frozen and carried in refrigerated containers to ports around the world. Some sheep and cattle, however, are transported on special ships while they are still alive and are killed and processed in other countries. This type of animal export earns about $1 billion a year for Australia and employs about 10 000 people in rural and regional areas.

Many Australians are opposed to live animal exports as they believe it is cruel to the animals. This is because they feel the importing countries may have lower standards of animal welfare than in Australia. From 2011, the Australian Government temporarily stopped the export of live cattle to a number of countries following concerns raised about the inhumane treatment of Australian cattle there.

For more information on the key concept of interconnection, refer to page 9 of 'The geography toolkit'.

skill**drill**

Constructing a flow map

Geographers use flow maps to describe the connection between events and show how things move between different places. Source 3 on page 153 is an example of a flow map.

A flow map is a particularly useful tool for displaying information about the movement of goods and services between places. Follow these steps to construct a flow map.

Step 1 Locate an outline map that displays all of the countries represented in your data, including the country of origin.

Step 2 Develop a scale to be included in the legend for the arrows you will put on your map. The size or amounts of the flows between the country of origin and the destinations are shown by the different widths of the arrows. The smaller the amount shown on the scale is, the narrower the arrow is; the larger the amount, the fatter the arrow.

Step 3 Join the country of origin with each destination using an arrow of the correct width according to the scale you have drawn. Plot these out in pencil first – you may need to try a few different designs to make all of the arrows fit neatly.

Step 4 Shade each destination and label each with its name and the relevant data.

Step 5 Finish your flow map with **BOLTSS**.

Apply the skill

1 Complete a flow map showing the destinations of Australia's live sheep exports. Use the figures in Source 2 and an outline map of the world as your base map.

Source 2 The top five destinations of live Australian sheep exported in 2010.

Destination country	Live sheep exports from Australia
Kuwait	578 000
United Arab Emirates	454 233
Qatar	239 414
Jordan	154 500
Oman	79 804

Source 3 A ship is loaded with Australian sheep in Adelaide bound for the Middle East.

Check your learning 4.13

Remember and understand

1 Why does Australia export food to other countries?

2 Why do some governments make it difficult to import food into their country?

Apply and analyse

3 Examine Source 1.

   a Is Oceania a net exporter or importer of grain?

   b Which region is the largest exporter of grain and which is the largest importer?

   c Examine your completed flow map.

   d Describe the distribution of the countries that import live sheep from Australia.

   e In small groups, discuss the possible reasons for the distribution you have noted. Consider a range of factors by using the SHEEPT (social, historic, economic, environmental, political and technological) method in your discussion. For more information on SHEEPT, refer to page 26 of 'The geography toolkit'.

Evaluate and create

4 Research the live animal trade further and list the arguments for and against this trade. Identify groups who support the trade and those who oppose it. What is your opinion, and what information did you base it on?

4.14 Connecting through sport

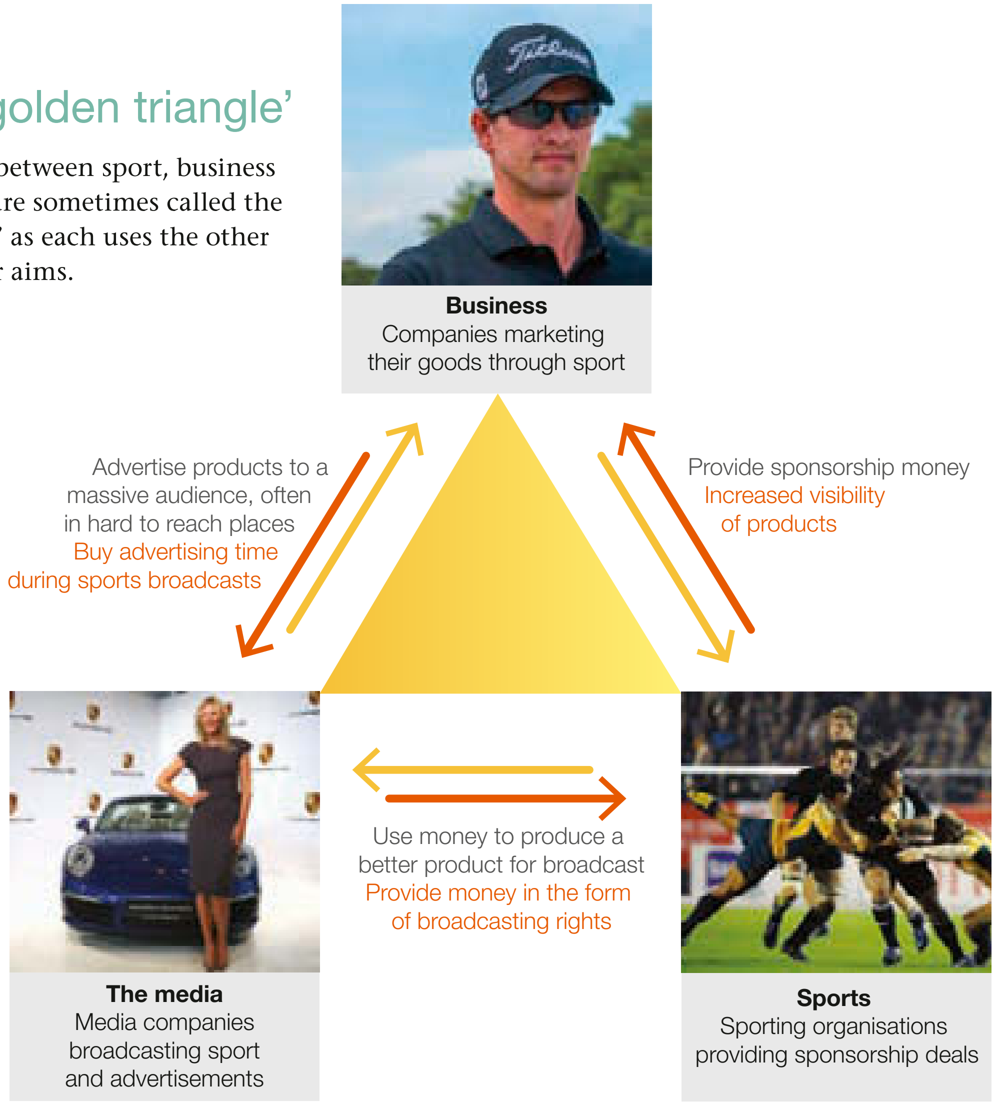
Many aspects of our daily lives are now influenced by globalisation. For example, the way in which we play, watch and connect through different sports and sporting codes has changed dramatically over recent years. In the last few decades, elite sportsmen and women have become global superstars, instantly recognisable around the world. The athletes, the sports they play, the teams they play for and the clothes and equipment they use have become commodities to be bought and sold by the highest bidder.

There are many factors driving the globalisation of sport, most of them connected to money. These include higher salaries for athletes and increased spending on leisure and entertainment. Perhaps the biggest driver, however, is the media and the global reach of sporting events that are broadcast live. Many companies, such as clothing and electronics manufacturers, have seized these new opportunities to advertise their goods to a global audience.

Put simply, sport is big business. It is predicted that by 2015, sport will generate $US 145 billion in revenue annually. While $US 44 billion of this will come from tickets sold to sports fans, the rest will come from media companies that buy the rights to broadcast events and companies that sponsor events or promote their products through sport.

Sport's 'golden triangle'

The close links between sport, business and the media are sometimes called the 'golden triangle' as each uses the other to advance their aims.


Business
Companies marketing their goods through sport
Advertise products to a massive audience, often in hard to reach places
Buy advertising time during sports broadcasts
Provide sponsorship money
Increased visibility of products
Use money to produce a better product for broadcast
Provide money in the form of broadcasting rights
The media
Media companies broadcasting sport and advertisements
Sports
Sporting organisations providing sponsorship deals

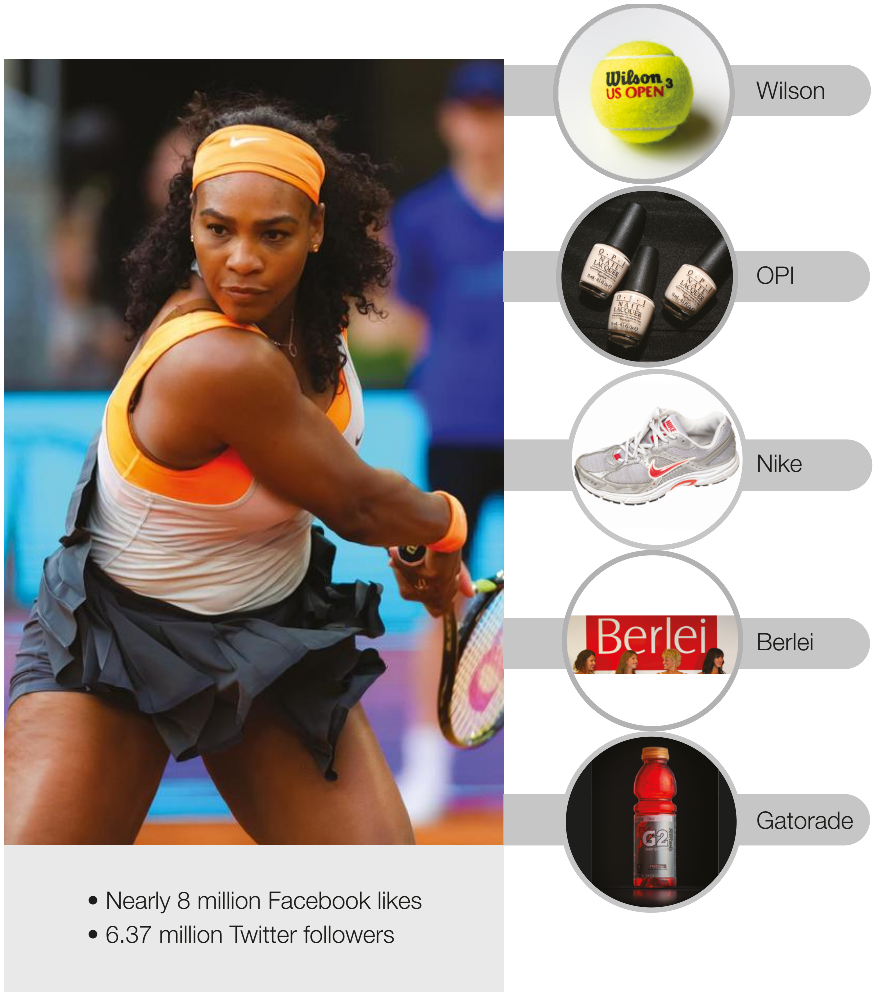
Source 1 The relationship between sport, business and the media is often referred to as the 'golden triangle'.

Case study: Serena Williams – a global brand

Like many sports stars, tennis player Serena Williams links together people and places all around the world. She has won tournaments in Britain, France, the United States, Australia, Japan, Switzerland, Qatar, Italy, Canada, South Korea, Germany and Luxembourg. She once travelled 77 000 kilometres in a two-month period to reach all of her tournaments in time.

Williams has been one of the highest paid female athletes in the world for a number of years. This is due to her continued success on the tennis court, along with the $US20 million she receives in endorsements from a range of companies around the world.

She has her own website and there are many fan websites dedicated to her as well. Serena Williams' fans all around the world can connect to her wherever she is by watching her play when her games are broadcast, following her on Twitter and Facebook, and buying the products she endorses.



- Nearly 8 million Facebook likes
- 6.37 million Twitter followers

Source 2 Serena Williams' many product endorsement deals and brand ambassadorships illustrate how people and places can be interconnected globally through sport.

Check your learning 4.14

Remember and understand

1 Explain how athletes and sportswear companies are linked.

2 Explain the links between media companies and sporting organisations.

Apply and analyse

3 Conduct a quick survey in which you ask 10 people to name one golfer, one basketball player, one tennis player, one soccer player and one racing driver. Combine your results with those of your classmates.

  a What percentage of the athletes named are Australian?

  b What countries were well represented in the answers?

  c What does this tell you about the globalisation of sport?

4 Examine Source 1. Explain how these photographs show how the golden triangle of sport works.

Evaluate and create

5 Create a map of the world that shows the ways in which Serena Williams links different places together.

6 Use the principles outlined in the golden triangle of sport to discuss why male athletes are usually paid more than female athletes.

7 Who are the potential winners and losers from sport's golden triangle?

4C rich task

The geography of you

You are a global citizen, and the things you use and consume come from different places all over the world. The decisions you make about the things you buy link you to people and places both near and far. This connection means that your decisions can impact on these people and places in both positive and negative ways. This broadsheet contains a series of activities that will make you more aware of the ways in which you are connected to producers of products and services from all around the world – and how they are connected to you.

skill**drill**

Collecting, recording and representing primary data

During any geographical inquiry, geographers will ask questions, collect a range of data and information, record their findings and represent them so they can be interpreted more easily. By following a process of geographical inquiry like this, geographers can be sure that the conclusions they reach will be accurate, useful and reliable.

Geographers often collect their own data by interviewing people, carrying out research, conducting surveys, taking photographs, or drawing field sketches. This kind of information is known as primary data. They record this primary data carefully before representing it in different ways (e.g. as diagrams, tables, charts, graphs, maps or a combination of these).

Collecting, recording and representing your own primary data is a great way to practise your skills as a geographer. Follow these steps to collect, record and represent a range of primary data about the clothes you wear, the stuff you own and the ways you connect to other people – in other words, the geography of you!

Source 1 Do you know where the things you use and wear come from?

Step 1 Construct a key inquiry question to begin your investigation, for example, 'Where do my clothes come from?'. Select 20 different clothing items from your wardrobe and record where each item was made. Try to select a range of clothing made from a variety of fabrics. The tags on your clothing will often include some information about where the item was made.

Step 2 Collect and record the information for your inquiry by creating a table or spreadsheet and entering your results into it.

Step 3 Choose the best way to represent your findings. Choose a format that clearly communicates the information. You may choose to represent this data as a table, a graph (e.g. pie chart, bar graph or line graph), an infographic or a map (e.g. a spatial distribution map or a choropleth map) – or even a combination of these things.

Apply the skill

Complete one or more of the following tasks to better understand the effects of your purchasing habits and Internet use and how your choices connect you to the rest of the world:

1 Exploring the origin of your clothing

Follow the steps outlined above to explore the origin of 10 items of your clothing. Collect the countries of origin for the 10 items you have researched, record the data and represent it in a suitable format of your choice.

2 Exploring the origin of your stuff

Select 10 items you use every day such as a pen, a computer and a DVD and examine them carefully to see if they contain some information about where they were made. You could also try an Internet search engine to research each item further but you may need the name of the manufacturer and a model name or number. Collect the countries of origin for any of the 10 items you have researched, record the data and represent it in a suitable format of your choice.

3 Exploring your communication links

Monitor your Internet and smartphone use for a week, recording the names and locations of people you communicate with via email, SMS, Facebook, Twitter, Instagram and online games. Enter the results into a table or spreadsheet.

Source 2 A worker shows a label on a piece of newly made clothing at the Bantai textile factory in Dhaka, Bangladesh.

Extend your understanding

1 Conduct your own research into the Rana Plaza disaster and how it brought worldwide attention to the issue of sweatshop conditions in Bangladesh. Investigate the conditions faced by workers in the sweatshops, and find out what is being done to address the problems with safety and working conditions. Write a half-page report outlining what you find.

2 Examine your wardrobe and make a list of the brands that you usually wear. Research whether or not these brands use factories in Bangladesh. Create a table to record your results.

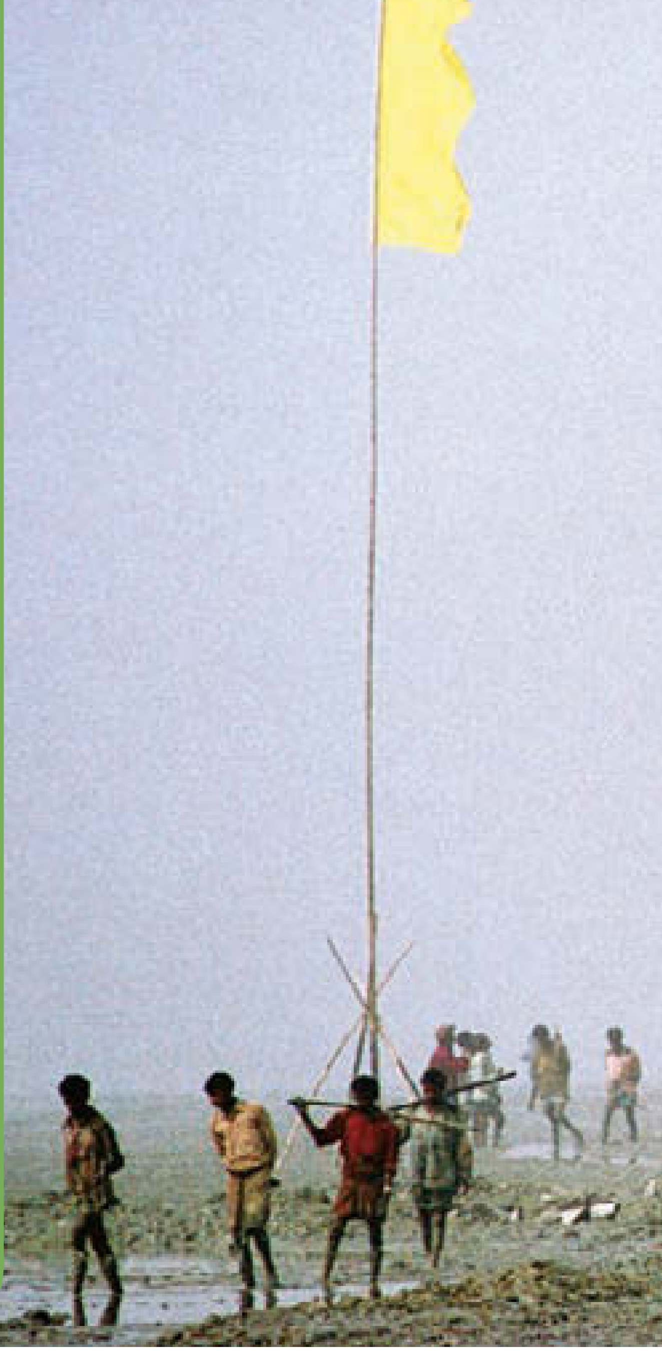
3 Do you think your purchasing choices have a direct impact on the people who work in factory sweatshops? List your thoughts, discuss them with a partner and report back to the class.

Geographies of interconnection

The effects of global connections

The increased movement of goods, services, people and ideas across the world has the potential to improve the lives of millions of people and bring cultures closer together. It also has the potential to degrade natural environments and to deepen the divide between the wealthy and the poor.

These men are employed as ship breakers at the Chittagong ship-breaking yard in Bangladesh. They pull apart old container ships and oil tankers by hand so the steel can be recycled and reused. Many of the ships are owned by the wealthiest multinational companies in the world. It is dirty and dangerous work and there are virtually no health and safety regulations to protect workers. A ship-breaker here can earn about $1.50 a day. Ships arrive in the South Asian breaking yards at the rate of about one a day.



5A

How does global trade affect people?

1. There are about 100 000 people in Asia employed as ship breakers. In what ways do these workers benefit from their employment?
2. Brainstorm the threats to health and safety for the workers at the Chittagong ship-breaking yard.

5B

How does global tourism affect people and places?

1. Tourism is one of the world's largest industries. What areas of Australia and the world are most visited by tourists?
2. In what ways does tourism change the natural environment in these places?

chapter 5

Source 1 Bangladeshi ship-breakers at the Chittagong ship-breaking yard pull apart old container ships and oil tankers by hand so the steel can be recycled.

5.1 An interconnected world

As you have learnt, we live in an increasingly interconnected world. Ideas, people, goods and services move more quickly, more often and in larger quantities than ever before.

Benefits and drawbacks of globalisation

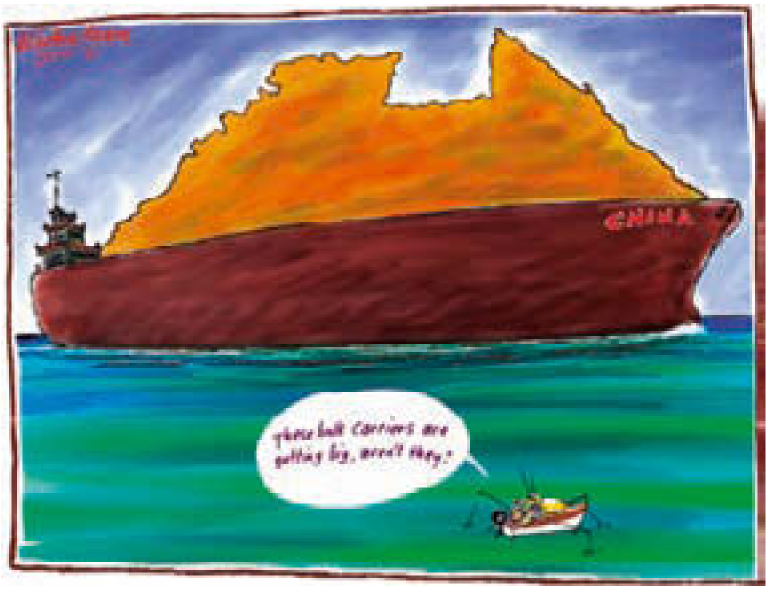
As with all changes, there are winners and losers. Consumers are obvious winners. We now have access to goods produced all around the world. Our homes are filled with goods made by people we will never meet in places we may never visit. We now have access to the skills, expertise and labour of billions of people to supply our needs and wants. Some companies, industries and countries are also winners. China, for example, has become increasingly wealthy and powerful by making and supplying goods and services for the global marketplace. Many people believe that having better trade between nations also spreads the world's wealth.

Despite the many winners, there are also clear losers. Workers in **developing countries** are sometimes exploited for their cheap labour and are paid much less than those in the wealthier countries who are buying the goods they produce. Their working conditions are often much worse as well.

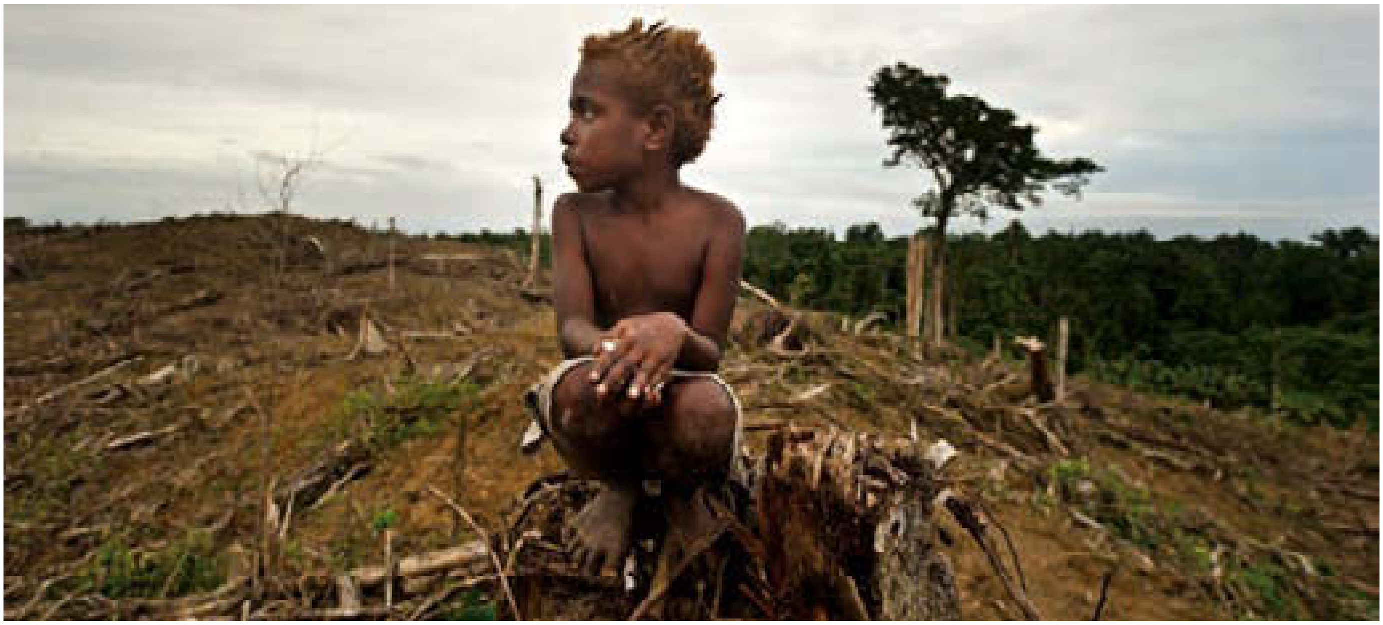
Globalisation can also lead to the loss of traditional skills and customs. Additionally, small local businesses can find it difficult to compete with large **multinational companies**. The closure of these businesses can lead to job losses for local workers and negative effects for societies and communities.

The environment is also often a loser when it comes to globalisation. As more and more raw materials such as timber, land and minerals are used to feed the world's factories, natural environments are changed forever (see Source 3). The need to transport these goods to countries all around the world also adds to major environmental problems such as air and water pollution, **deforestation** and **climate change**.

Source 1 Sharing culture, food and language are just some ways global trade has influenced the experiences of people around the world.


CHINA
these bulk carriers are getting big, aren't they!

Source 2 Cartoonists often portray a complex issue using a simple image, employing the device of humour to do so.



Source 3 Steven, a Mooi child, squats in front of what used to be the forest that supported his community. The Mooi are one of the Indigenous people who live off the forests of West Papua. Their ancestral lands are being devastated by logging and taken away for palm oil plantations. Palm oil is used in many processed foods in Australia.

From 'riding on the sheep's back' to 'riding on the dragon's tail'

Australia today is part of the global marketplace. Billions of dollars' worth of goods and services are traded between Australia and the rest of the world every year. For much of the last century, most of Australia's exports came from the farming sector and our major trading partner was the United Kingdom. Products such as wool, butter and meat were shipped around the world and sold to British consumers. Australia was known as 'Britain's farm', and because our prosperity largely came from the sale of wool, Australia was said to be 'riding on the sheep's back'.

This century has seen dramatic changes in our main exports and trading markets. Less than 10 per cent of our total exports now come from the farming sector and the United Kingdom is only our fifth biggest trading partner. Over half of our total exports now come from the mining sector (mainly iron ore, coal and gold) and our two biggest trading partners are China and Japan. China is by far our leading supplier of imported goods (A$41 billion a year) and buyer of our exports (A$64 billion a year). This change has led many observers to remark that Australia is no longer riding on the sheep's back – instead we are riding on the dragon's tail.

Check your learning 5.1

Remember and understand

1 How has Australia's place in the global marketplace changed over the last 50 to 60 years?

2 What Australian products make it important in the global marketplace?

Apply and analyse

3 Examine Source 1. Can you imagine how you might feel if you went to a McDonalds or other fast-food store in another country? What similarities and differences might you find?

4 Examine Source 3.
   - a Do you think the child shown in this picture has benefited from global trade in any way?
   - b What possible local benefits could there be from the logging that takes place in this area?

5 Examine Source 2. What point is the cartoonist making about the relationship between China and Australia?

Evaluate and create

6 Design a political cartoon based on the phrase 'riding on the sheep's back' or 'riding on the dragon's tail'. Before you begin, think about the message you want to convey about this phrase.

7 What benefits do you experience from the global increase in trade links between people and places? In what ways are you worse off because of these links? Are you a globalisation winner or loser?

5.2 Benefits of global trade for people

Benefits for individuals

Global trade means that you are now linked to manufacturers all over the world. This means that you can buy a wider range of products at cheaper prices than ever before. You are not restricted to paying for services or buying goods made in your local area, or even in your own country. Because of an intricate web of connections involving people from many countries, you now have access to the global marketplace.

Online trade is spreading fast. As just one example, Australians have embraced online shopping for clothes at a remarkable rate. A single company, the British fashion site ASOS, racks up a purchase from Australia every six seconds, and is flying four jumbo jets of clothing into Australia every single week.

Not only do the buyers of goods and services benefit from global trade – there are also enormous benefits for the people that supply them. Employment and wealth has been created for hundreds of millions of people. This has improved living standards and **life expectancies** in many places and helped to pull people out of poverty. It is estimated, for example, that there are 600 million fewer people living in poverty in China today than was the case 30 years ago. This is largely because China has been transformed from an economy based on farming, supplying itself, to one based on manufacturing, supplying the world.

DKNY JEANS
DKNY JEANS

Source 1 Australian shoppers have access to goods from all over the world.

Source 2 Nike employs more than one million people in 777 factories in 43 countries, including China. It began as a single factory in the United States but now only 1 per cent of its workers are employed in that country.

Benefits for businesses

Businesses are now linked to buyers from around the world. This means they may be able to sell more products to more people. They may also be able to access cheaper raw materials such as coal, iron and cotton from other places. These **interconnections** allow them to keep their costs down and sales up which creates higher profits.

As well as accessing cheaper materials from other countries, many companies have moved much of their manufacturing base to other countries. This is often done to take advantage of lower labour costs in these countries. Many products in Australian stores carrying the labels of Australian companies, for example, are made in places such as Vietnam, China, Bangladesh and Fiji.

Benefits of global trade for nations

Most nations around the world have welcomed the opportunities that closer links between nations have brought. Many have found that the benefits are greater if they specialise in a particular product or service. This is known as comparative advantage.

Source 3 The Indian film industry, part of which is known as Bollywood, is the largest in the world. India has a comparative advantage in film-making based on its large population, technical knowledge and fine weather.

If, for example, you can buy cheap cars from other places then you don't have to make your own. You can focus on producing another product such as clothing or electronics. If you are able to make these better or cheaper than any other country then you will capture the market.

There is also movement of money, ideas, knowledge and technology between countries. Ideas and advances in medicine, education and business can move quickly around the world. This can help to remove cultural barriers that often exist between countries, including language and religious differences. Sharing knowledge and ideas in this way also helps us move towards what is known as the 'global village'.

Some aspects of globalisation benefit people, businesses and entire nations. Bollywood, the Hindi-language part of the Indian film industry, is an example of this. The volume of movies produced means that individual actors (both Indian and international), dancers, musicians, and other film professionals benefit from employment in the industry. Businesses reap the rewards on both small and large scales. Supporting businesses (catering or lighting businesses, for example) enjoy employment and, on a wider scale, the film industry at large benefits from the continued success of Bollywood films. The nation benefits, too, in many ways, just one of which is the increased awareness of Indian culture on a global level.

Check your learning 5.2

Remember and understand

1 What are some of the ways in which you benefit from global trade?

2 In what ways does the increasing globalisation of trade benefit other people?

Apply and analyse

3 Explain how global trade can help to reduce poverty.

4 What is comparative advantage? In which goods or services do you think Australia has a comparative advantage?

5 How does the Indian film industry help to break down cultural barriers?

6 In what ways has the Chinese economy transformed over the last 40 years?

Evaluate and create

7 Many businesses that use cheaper labour in developing countries are often reluctant to reveal this.
   a Explain why you think this is the case.
   b Nike is a notable exception to this trend. Explore the interactive map at http://manufacturingmap.nikeinc.com/ to find out where Nike products are made. Which country has the largest number of Nike employees, which has the most Nike factories and how many Australians are employed in Nike factories?

8 Draw a diagram or find an image that sums up the concept of a global village to be displayed on your classroom wall. Examine the range of images submitted by your class and discuss the different ways you and your classmates have chosen to represent the idea.

5.3 Benefits of global trade for people in Australia

Australia is an active participant in the movement of goods and services around the world. We are the 55th largest country in terms of our population but the 23rd biggest exporter and the 21st biggest importer. Each year, around $500 billion worth of goods and services move between Australia and other countries. This trade brings many benefits to Australian individuals and businesses and to the country as a whole.

Benefits for individuals

Millions of Australians are employed in industries that export goods and services. These include agriculture, mining and tourism. Many others work in industries such as retail and manufacturing that rely on imported goods and services. This trade creates wealth and prosperity for these people and for the nation as a whole.

Australia's largest service export is education. There are more than 400 000 citizens of other countries enrolled in Australian universities and other education providers. This generates more than $16 billion of export earnings for Australia every year. As well as the financial benefits, Australia also receives other benefits. Many of these students apply to stay in Australia when they have finished their education and this leads to an increased number of people in many occupations, including medicine and education. Those that return to their home countries improve the level of skills in those countries and often help to improve levels of wellbeing.

Benefits for Australian businesses

Many Australian businesses have been able to take advantage of the increasing trade connections between people and places to become major players on the world stage. This includes Australian mining companies that have dominated world trade in minerals, such as iron ore, coal and gold, as well as smaller companies that have developed uniquely designed products. Australian surf-wear brands are a good example of this.

Case study: Crumpler

The Australian brand Crumpler, most famous as the designer and supplier of distinctive messenger bags, is an example of an Australian business that has benefited from the interconnections of global trade. The Crumpler business had humble beginnings in a shed in Ballarat, outside Melbourne, where the first prototype bag was made by Stewart Crumpler himself. From there, the company grew rapidly and achieved success and has sold millions of products all over the world, reaching a wide global marketplace.

Crumpler has stores across Australia and all over the world, including in Japan, the United States, Canada, the

Source 1 These overseas students are studying at the University of Sydney. Chinese students are the largest group of overseas graduates there followed by those from India, South Korea, Malaysia and Brazil.

Source 2 Crumpler is an example of an Australian company that has achieved global success.

Philippines, Singapore and China. The head office is in Berlin, Germany. A key factor of the brand's success has been the high level of international sales, with stores supported by online sales and distributors in many other countries as well.

Crumpler has 1500 Twitter followers and almost 10 000 likes on Facebook, extending its global reach and consolidating its urban 'street' image.

Benefits of global trade for the Australian nation

It is difficult to work out exactly how much individual countries benefit from increasing trade links. Most researchers, however, agree that Australia has gained much from our greater interconnections since the 1970s. From this time we began to expand our range of trading partners from traditional markets such as the United Kingdom and New Zealand to markets throughout the world, particularly in Asia. Australian governments continue to try and reduce barriers to trade around the world and have done so for decades.

About one in every seven Australian workers is now employed in the production of exports. The figures are particularly high for those in mining (seven in every 10), farming (four in every 10) and manufacturing metal products (three in every 10). This brings extra revenue to the whole country through taxes and levies on workers and companies and has the potential to improve the wellbeing of many Australians. This has been particularly significant for many Indigenous Australians who have traditionally worked in agriculture. Many have also found employment in the booming mining sector.

Multiculturalism

The interconnections that come with global trade can bring many benefits apart from financial ones. As people move to or communicate with those from other places, there is a natural sharing that occurs. This can enrich the cultural landscape, as aspects of life such as language, religious tradition, art and food are shared and integrated with or added to the existing culture.

Sharing a different range of experiences and learning about different ways of doing things can have many positive results. Multiculturalism can broaden our outlook, lead us to interests or hobbies we wouldn't have otherwise heard about, or create opportunities to do further study or travel. This kind of sharing can do more than just provide an interesting experience – it also has the benefit of promoting mutual understanding and accepting others' differences (see Source 3). This in turn may lead to a more harmonious society that is accepting of diversity.

From an economic perspective, a successful multicultural society makes Australia an attractive destination for tourism, education and business.

Source 3 There are many benefits that come with the interconnection that accompanies global trade. Learning about other cultures and food traditions are just a couple of them.

Check your learning 5.3

Remember and understand

1 In what ways can Chinese citizens studying in Australia bring benefits to both countries?

2 How did Australia's global trade connections change during the 1970s?

Apply and analyse

3 Australia has a comparative advantage in providing a university education when compared to many other countries. Work with a partner to brainstorm the reasons for this and then discuss this with your class.

4 Read the case study about Crumpler.
  a Use the key concept of interconnection to explain the business operations of Crumpler.
  b List five ways that Crumpler benefits from being interconnected with places all around the world.

5 Examine Source 3.
  a Can you think of other examples of the positive effects of multiculturalism apart from the ones shown?
  b Have you ever had an exchange student from another country visit your school? If so, what did you learn about their country?

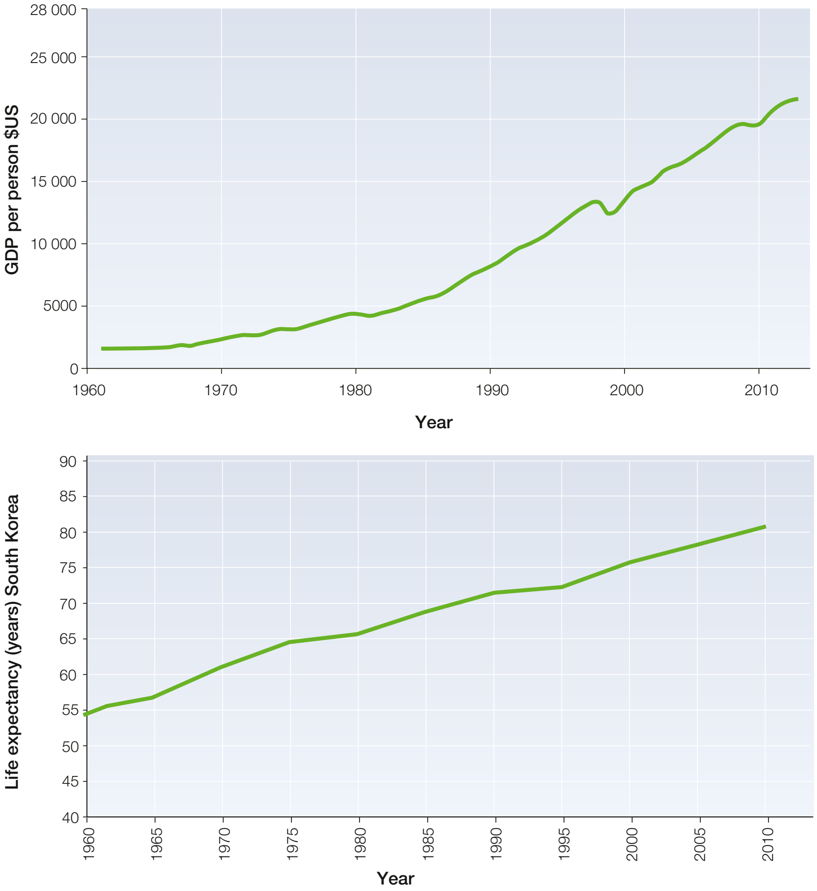
5.4 Benefits of global trade for people in the Asia–Pacific region

Trade in the Asia–Pacific region is thriving, and interconnection with other countries through trade has brought many benefits to the region. The boom in the demand for information and communications technology equipment in particular (such as smartphones, tablets and computers) has accounted for much growth, while places such as Indonesia and Vietnam have driven exports of manufactured goods such as clothes and shoes. Machinery and transport are strong growth areas, and industries such as shipbuilding are expected to provide continued benefits to some Asia–Pacific economies, such as South Korea. Benefits that accompany global trade activity include a buoyant economy, higher employment levels, a higher standard of living, better access to health care and increased life expectancy.

Case study: South Korea

South Korea is an example of a nation that has embraced global trade and the benefits that it can bring. It has transformed itself from a poor nation with a large rural peasant population 50 years ago to a modern, urbanised society with one of the highest levels of wellbeing in the world. Along with Hong Kong, Taiwan and Singapore it is known as an 'Asian Economic Tiger'. These four countries are now seen as a role model for other expanding economies including Indonesia, Malaysia, the Philippines, and Thailand (known as the Tiger Cub Economies).

In 1960, South Korea was considered one of the world's poorest nations. It is now Asia's fourth largest economy and the world's 15th largest. South Koreans enjoy an average wealth greater than the



Source 1 The increase in the average life expectancy of South Koreans presents an interesting picture when compared to the Gross Domestic Product (GDP). These graphs, which show the data for the country from 1960, could be used as secondary sources for a geographical inquiry.

SAMSUNG
The Next Big Thing Is Here

Source 2 Samsung is one example of a South Korean company that has achieved massive global success. Samsung Electronics is the largest company in South Korea and the world's largest producer of smartphones, computer chips and televisions.

average European citizen, as measured by the Gross Domestic Product (GDP) per person. Since 1960, the average life expectancy in South Korea has increased from 54 years to 81 years.

This amazing transformation is due largely to the country's growing importance as a trading nation. It has chosen to concentrate on industries such as electronics and motor vehicles that require a large, highly skilled labour force. The nation invests heavily in educating young people and providing them with the skills they need in these industries. As a result, South Korea is now the world's sixth largest exporter of cars and the fourth largest manufacturer of electronic goods.

The Korean Wave

Riding the crest of increased prosperity and electronic communication via the Internet, South Korean culture is spreading around the world. The push to promote local culture actually began in the 1990s, when the South Korean government became concerned that cultural traditions were in danger of being over-run by influences from China, Taiwan and Japan. They began to encourage the growth of local cultural expression in movies, television programs and music.

Some of the nation's largest businesses, including LG, Hyundai and Samsung, were encouraged to invest in these industries and continue to do so. Korean television dramas have become the most watched programs throughout much of Asia, and Korean pop (K-Pop) bands have become hugely popular throughout much of Eastern Europe and the Middle East. In 2011, K-Pop YouTube clips were viewed 2.28 billion times, with Japan, United States and Thailand topping the list of most frequent viewers.

The South Korean government has continued to encourage the spread of Korean culture (known as the Korean Wave) as it is seen as a way of promoting South Korean views and encouraging a positive view of the country. This is regarded as important in continuing to build South Korea's reputation as an important player on the global stage.

Source 3 Korean pop, known as K-Pop, is growing in popularity. The musical sensation Psy had a massive worldwide hit in 2012. His single *Gangnam Style* topped the music charts in more than 30 countries around the world, including Australia.

Check your learning 5.4

Remember and understand

1 What social and economic changes have occurred in South Korea since 1960?

2 What links do you have to South Korea?

3 What are the 'Asian Economic Tigers'?

Apply and analyse

4 Examine Source 1.

- a Describe the change over time in life expectancy and GDP per person in South Korea.
- b Explain the links between these two measures of South Korean society.

5 What is K-Pop? Explain how it is an example of the growing interconnection of people around the world.

Evaluate and create

6 Draw a flow map that shows the movement of goods and services between South Korea and other nations. Use arrows to show the direction of these movements.

7 K-Pop is an example of the ways in which one country's culture can influence cultures in other places. Can you think of other examples of this principle?

5.5 Drawbacks of global trade for people

Global trade has the potential to bring benefits to people and to places. It is a leading contributor to reducing poverty and provides wealth and prosperity for countless people. However, these benefits often come at significant economic and social cost to other people in other countries. This takes place at individual, business and national levels.

Drawbacks for individuals

Many companies that are based in developed countries actually manufacture their goods in developing countries. This is usually to take advantage of the cheaper labour that is available in these developing countries. While this provides jobs and income for millions of people, manufacturing in developing countries does come at a cost. Workers are paid much less than those who perform similar tasks in developed countries and they often work in appalling conditions.

The demand for cheap labour and high levels of poverty means that child labour is used in some countries. There are estimated to be over 200 million children working in the world. Most of these children work on small family farms in developing countries but around 160 000 of them work in manufacturing.

Countries with high levels of child labour tend to share similar characteristics. These include:

- high **fertility rates** and a large percentage of the population being under the age of 15
- low rates of school attendance and low levels of literacy
- low levels of technology in comparison to other countries with whom they are competing
- a lack of government policies to deal with child labour
- large numbers of people living in poverty.

Source 1 Workers in a clothing factory in Dhaka, Bangladesh

Drawbacks for businesses

The interconnections that link the consumer to the person who made their product have, in some cases, become so complex that businesses lose control of the process. In Asian countries such as India and Bangladesh, for example, it is common practice for manufacturing plants to 'outsource' parts of their operations to smaller factories. They, in turn, may also outsource parts of the operations. The company executives in an office on the other side of the world then have little idea of the factories they are actually using, or whether they are involved in unsafe work practices. It also makes it difficult to maintain quality controls on the products. Additionally, there may be a backlash from consumers in the developed world once these practices become known to them.

Drawbacks for nations

Many critics of the growth in trade between countries believe that it benefits the people and businesses of the developed world at the expense of those in developing countries. These poorer countries are seen only as a source of cheap raw materials and labour. This, they argue, tends to widen the gap in wellbeing between wealthy and poor countries.

Another criticism of increased globalisation in trade is that problems in one place can affect many other places very quickly. In 2008, a dramatic fall in house prices in the United States triggered a global financial crisis and caused banks and investment companies to collapse throughout the developed world. Many companies were forced to close and spending on consumer goods fell dramatically. As developed countries reduced their consumer spending, imports went down and hundreds of thousands of people in developing countries were also plunged into poverty.

Financial problems are not the only things to spread quickly. Greater global trade may also result in the spread of infectious diseases between regions of the world as people travel more frequently for trade. In 2002–03, a respiratory disease, SARS, was spread by tourists from its origins in China to many other countries. By the time the epidemic finished, it had killed more than 8000 people in 17 countries. Outbreaks of bird flu and other health concerns like norovirus can also be spread quickly by people who are travelling around the world for business.

STOP G20
불안정 일자리 G20 반대!

Source 2 These protesters in South Korea are campaigning against a G20 meeting of the leaders of the world's wealthiest nations. Many people are concerned that increasing global trade results in a widening gap between rich and poor countries.

Check your learning 5.5

Remember and understand

1 Why do many children in developing countries work rather than go to school?

2 What is outsourcing? How can it negatively affect people and businesses?

3 Factories such as the one in Source 1 are often called 'sweatshops'. Why do you think this is the case?

Apply and analyse

4 Examine Source 1.

- **a** Estimate the number of workers in this room.
- **b** Estimate the percentage of women workers.
- **c** What are the roles of men in this factory? What does this tell you about gender roles in this place?

5 Imagine that you work in the clothing factory in Source 1. Describe a day at work.

Evaluate and create

6 Examine Source 2 showing a protest group in South Korea. Create a table listing both the benefits and the costs of global trade. Discuss which groups in society are likely to be opposed to globalisation and which would support it.

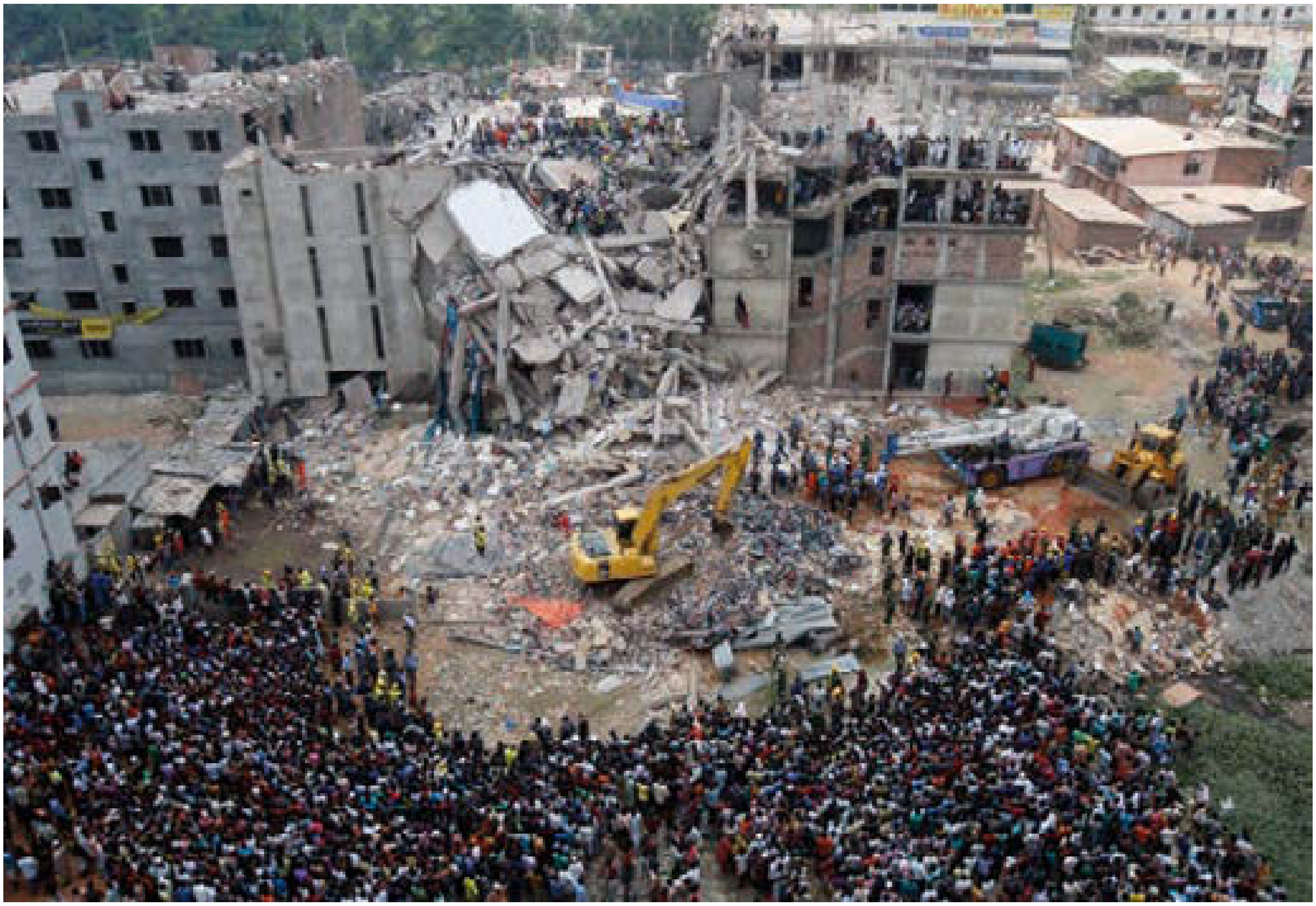
7 Research the global financial crisis (GFC) or the SARS epidemic and construct a flow diagram showing its spread within and between countries. How were global trade connections involved?

5.6 Drawbacks of global trade for people in Asia

Asia is the world's largest continent and home to three-fifths of the world's people. Its 48 countries contain a wide diversity of cultures, languages and ways of life. In some Asian countries, most of the population live in small villages and depend on their food-growing skills for their livelihood and to feed their families. In other parts of Asia, more and more people are working in industries such as agriculture, tourism and manufacturing. This growing involvement in industry has led to some alarming work practices. These include using child labour, unsafe working conditions and working hours that include factory shifts of up to 19 hours a day.

Case study: clothing factories in Bangladesh

The clothing industry is the largest in Bangladesh, accounting for about 80 per cent of all exports. It employs about 3.5 million people, most of them young women. Working conditions and wages vary a great deal within the Bangladeshi clothing industry but a worker can typically earn about $50 a month. Workers officially usually work 10-hour days, but there are many reports of workers being locked into factories for much longer hours, sometimes from 7.00 a.m. to well past midnight, seven days a week.



Source 1 Rescue workers search for survivors in the rubble of the collapsed Rana Plaza building – Dhaka, in Bangladesh.

American clothing manufacturers began to outsource to Bangladesh in much greater numbers in 2005, following the end of an agreement that had kept a percentage of clothing production in the United States. In the rush, clothing factories were hastily installed in Bangladesh. Building regulations were overlooked and poorly controlled and factories were set up in buildings unsuitable for thousands of workers and their heavy machinery. Many lacked suitable fire exits and ventilation, making conditions in them both dangerous and uncomfortable. Hundreds of workers have died in fires in these factories as a result.

Perhaps most disturbingly, a survey by engineers found that three-fifths of the clothing factories are vulnerable to collapse. In 2013, concrete pillars supporting an eight-storey building on the outskirts of Dhaka collapsed (see Source 1). The building was home to five clothing factories and thousands of workers. More than 1100 people were killed, making this one of the world's worst industrial accidents. The building's owner only had permission to construct a five-storey building but illegally added three more floors to fit in more workers. He also installed heavy generators to counter the frequent disruptions to the electricity supply.

Case study: ball stitching in India

Many Australian companies that supply the leather and synthetic balls you use for sport have their balls stitched in India. A newspaper investigation in 2012 found that many of the balls are being stitched by children who have been taken out of school by their parents to help earn money to support the family (see Source 2).

While Australian companies use factories that have signed agreements stating they will not use child labour, the reality is that many of them do. During busy times, when the factories are overloaded with work, they use other smaller companies to help meet the labour demand. These companies employ children, most of them young girls, to stitch the balls.

Ten million balls are made in India and shipped to Australia every year in an industry worth about $1 billion. Each worker in India receives about eight cents per ball. It takes about an hour to hand stitch each ball, a task that is hard on fingers and eyes.

For people living in poor villages, however, sending their children to work doing such intense labour – at the expense of an education – is often the only option for the family's income.

Source 2 Twelve-year-old Reena works five hours a day, seven days a week to stitch together balls for Australian children. She thinks she has fallen three years behind her classmates in her schoolwork as a result.

Check your learning 5.6

Remember and understand

1 Why did the Rana Plaza building collapse?

2 Calculate how much workers in Bangladeshi clothing factories are paid a week. Compare this to the minimum weekly wage in Australia which is $656.90. How does this help to explain why more clothes are made in Bangladesh than in Australia?

Apply and analyse

3 Examine Source 2. Explain how Reena is linked to people in Australia. How has this interconnection impacted on her?

4 Why do you think workers in developing countries such as India and Bangladesh are more vulnerable to low wages and poor working conditions than those in developed countries?

Evaluate and create

5 The people who died in the Rana Plaza collapse have been called 'victims of globalisation'. Do you think this is a fair description? Give some reasons for your answer.

6 Some clothing companies have decided to close their factories in Bangladesh due to poor publicity following the building collapse. Do you think this is a good thing or a bad thing for workers in Bangladesh? Discuss this with your class.

5.7 The effects of globalisation on Indigenous peoples

The original inhabitants of a region or country are known as its Indigenous people. These communities often developed a way of life suited to the natural environment in which they lived without influence and interference from the outside world.

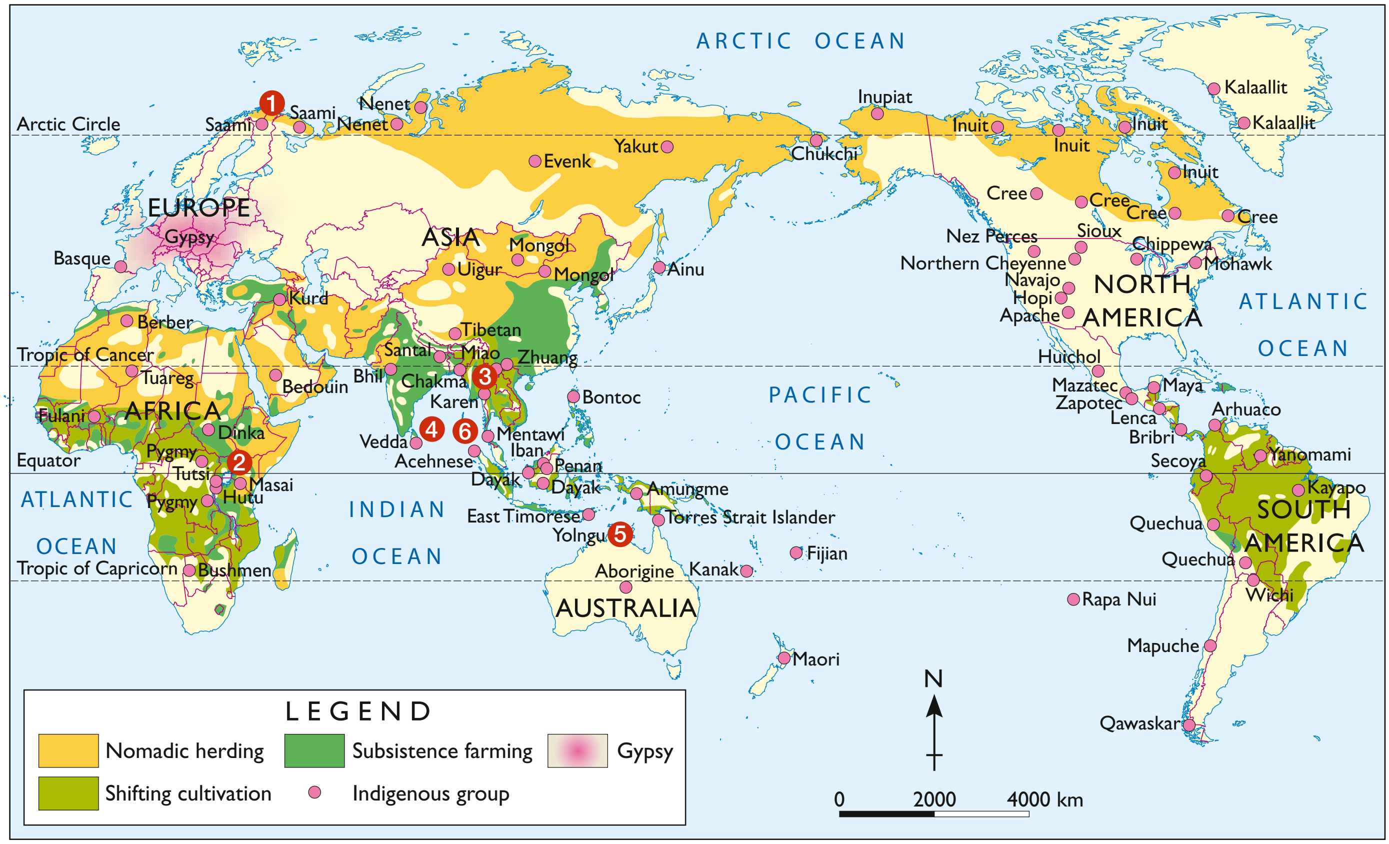
With increased links between people and places, Indigenous peoples and their cultures have been threatened by the expansion of dominant cultures, or from the arrival of new people and cultural groups.

As people from different cultures have moved around the world and settled in new places, they have often come into contact with the Indigenous peoples. In some cases this first contact has been friendly, while in other cases conflict has broken out. Whatever the nature of the first contact, the long-term effects are largely negative for Indigenous peoples. They often become a minority in their own country and suffer from widespread prejudice and discrimination. As a result, their unique culture is threatened and may become extinct.

The United Nations estimates that there are almost 5000 Indigenous groups in the world today. In total, this accounts for about 370 million Indigenous peoples living in 70 countries. Australia is home to two groups of Indigenous peoples – Aboriginal Australians and Torres Strait Islanders.

The world map (see Source 1) and the information provided on the following page give examples of some of the Indigenous cultures currently threatened by new global links, and explains how they have been affected.

WORLD: INDIGENOUS PEOPLES

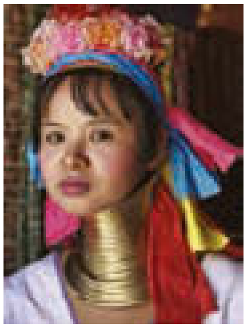

ARCTIC OCEAN
ATLANTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
EUROPE
ASIA
AFRICA
AUSTRALIA
NORTH AMERICA
SOUTH AMERICA
Arctic Circle
Tropic of Cancer
Equator
Tropic of Capricorn
Saami
Saami
Nenet
Nenet
Evenk
Yakut
Chukchi
Inupiat
Inuit
Inuit
Inuit
Inuit
Kalaallit
Kalaallit
Cree
Cree
Cree
Cree
Nez Perces
Northern Cheyenne
Sioux
Chippewa
Mohawk
Navajo
Hopi
Apache
Huichol
Mazatec
Zapotec
Maya
Lenca
Bribri
Arhuaco
Secoya
Yanomami
Kayapo
Quechua
Quechua
Wichi
Rapa Nui
Mapuche
Qawaskar
Basque
Gypsy
Kurd
Berber
Tuareg
Bedouin
Fulani
Dinka
Pygmy
Tutsi
Masai
Pygmy
Hutu
Bushmen
Uigur
Mongol
Mongol
Ainu
Tibetan
Santal
Miao
Zhuang
Bhil
Chakma
Karen
Bontoc
Vedda
Mentawi
Iban
Acehnese
Penan
Dayak
Dayak
Amungme
East Timorese
Torres Strait Islander
Yolngu
Aborigine
Kanak
Fijian
Maori
1
2
3
4
5
6
N
0
2000
4000 km
LEGEND
Nomadic herding
Subsistence farming
Gypsy
Shifting cultivation
Indigenous group

Source 1

Source: Oxford University Press

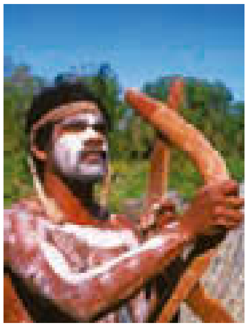
① The Saami

The Saami are the Indigenous people of Northern Europe, living in parts of Norway, Sweden, Finland and Russia. The Saami are traditionally semi-nomadic reindeer herders, but today, many Saami have modernised and now use snowmobiles and helicopters to herd the reindeer. However, pasture land for the reindeer is becoming limited as oil and gas mining are developed on traditional Saami lands. The Saami are facing other environmental threats from dam building, logging and the effects of climate change.



③ The Karen

The Karen is an Indigenous group from Myanmar (Burma) who have long fought for their own homeland. Located in a political **hot spot**, the culture and lifestyle of the Karen have long been under threat from political tensions and military action in Myanmar (Burma). There are estimated to be 200 000 Karen hiding in the jungle from the Burmese army, and many Karen have fled across the border to Thailand. Here, they find themselves in refugee camps, or in villages where they are little more than a tourist attraction.



⑤ The Yolngu

Arnhem Land, in the Northern Territory of Australia, is owned solely by the Indigenous Yolngu people. They are attempting to balance the needs of their traditional Aboriginal heritage with the demands of the mining industry, an industry which is a huge business for Australia. Some argue that while there are serious problems within their own communities – health, poverty and substance abuse – Yolngu manage a way of life that blends Western technology with traditions that have been passed through generations.

② The Masai

The Masai are the semi-nomadic people of East Africa, and live in southern Kenya and northern Tanzania. The Masai have been subjected to eviction and to opposition to their semi-nomadic lifestyle over many years. Masai lands in Kenya were reduced by 60 per cent at the beginning of the 20th century, when the British took the lands to build ranches, then later, wildlife reserves and national parks. Today, loss of land to large-scale private farms and game parks for international tourists has made nomadic grazing impossible for the Masai. Many Masai now live in towns or depend on tourism for survival.

④ The Vedda

The Vedda people are Indigenous to Eastern Sri Lanka, and were originally forest-dwellers. The Vedda people have been exploited for centuries by outsiders wanting their land. This land has been turned from forest to housing developments and government parkland. The Vedda have been banned from the parkland areas. Those who do still try to hunt risk being arrested or even shot by park guards.

⑥ The Mentawi

The Mentawi are the native people of the Mentawai Islands in Indonesia. The Mentawi have traditionally relied on the rainforests of the Mentawai Islands for all their needs. Today, rapid change has led to the clearance of forests, replacing the forests with profitable palm oil plantations. As a result, the Indonesian government has relocated many Mentawi to villages where they are unable to follow their traditional ways. They now suffer high rates of poverty and disease.

The Mentawi have found themselves the unlikely beneficiaries of Internet connections via groups like Surfaid, which aims to help people in isolated areas Surfaid's members are connected to through surfing.

Check your learning 5.7

Remember and understand

1 Why do Indigenous populations often decline when settlers from other places arrive?

2 In what type of environment do the Saami live?

Apply and analyse

3 List one forest-dwelling Indigenous group. What threats to their way of life do forest-dwelling Indigenous groups face?

4 What do the Masai and the Mentawi have in common?

5 Give an example of how technology has changed the way of life of one Indigenous group.

Evaluate and create

6 Make a list of the ways in which Indigenous cultures are changing. Construct a flow diagram showing how some or all of these changes are connected to each other.

7 Select one of the Indigenous groups described on these pages. Research the issue described and report back to your class on the ways in which this group is changing.

5A rich task

The global coffee trade

Coffee is one of the world's most traded commodities. About $17 billion worth of coffee is traded between producing and importing countries every year. This makes it the second most valuable commodity (after oil) in the world. It is a particularly important crop to many developing countries as it accounts for as much as one-third of their entire export earnings. More than 25 million people are employed in the coffee industry, many of them small farmers.

The overall demand for coffee is growing rapidly and this is causing many changes in its production and processing. Many small farmers in developing countries are finding it difficult to compete with large plantations, which are often owned by companies from developed countries. The demand for coffee is also creating environmental problems, particularly the clearing of rainforest to make way for new plantations and an increased demand for fresh water.

The coffee that ends up in your cup begins as a bean grown on plants in tropical countries, often on hillsides. The beans are picked, washed, dried, sorted and packed into 60 kilogram bags for export. Once transported, the beans are roasted and ground before being packaged and sold to the consumer.

Source 1 Brazil is the world's largest coffee producer and exporter. Coffee farms range from large plantations owned by transnational companies, such as this one, to small plots owned by a single farmer.

skill**drill**

Describe, explain and compare patterns on maps

Geographers often use maps to interpret and analyse complex information and reach some conclusions. While a single map is a useful tool for describing a pattern, we can compare several maps to help explain these patterns. Follow these steps to describe, explain and compare the patterns on maps.

Step 1 Examine the first map carefully. Look at the title and the legend so that you know precisely what the map is showing. Take note of any patterns that you notice. These may be a cluster of similar features located close together or other patterns such as features in a rough line (**lineal pattern**) or spreading out like spokes on a wheel (**radial pattern**).

Step 2 Repeat Step 1 for the next map and for any other maps you are using.

Step 3 Look for similarities between the maps. You can do this by using your notes and by scanning the maps with your eyes. You are looking for sets of data on the maps that seem to roughly follow similar patterns. Make a note of these similarities.

Step 4 Use your observations to find a logical explanation for these similarities. For example, when comparing maps of altitude and temperature it is logical that temperatures will fall as altitude increases. Similarly, it is logical that tropical rainforests are found in warm areas with high rainfall.

Apply the skill

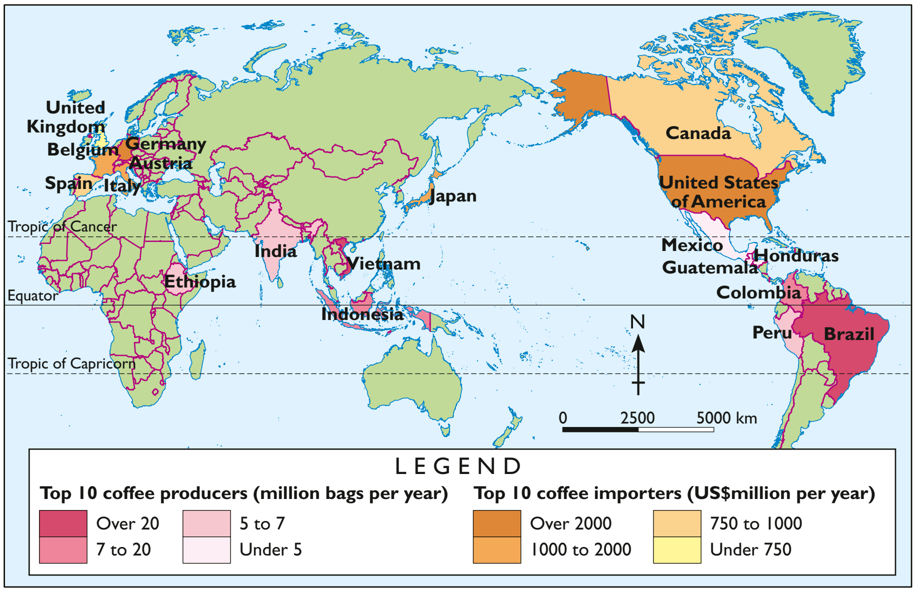
1. Examine Source 2, showing the world's top coffee producers and coffee importers. Describe the distribution of the world's top coffee producers. Pay particular attention to the Tropics of Cancer and Capricorn.
2. Examine Source 4, showing the world's climates. Describe the main climate types found in the tropics.
3. Compare your answers to the previous questions and explain the distribution of the world's top coffee-producing countries.
4. Use Source 2 to describe the distribution of the world's top coffee importers.
5. Having examined the maps in Sources 2 and 4, what climate factors do you think influence the growing of coffee? What climate factors are apparent in the areas that import large amounts of coffee?

Extend your understanding

1 Many coffee-producing countries rely very heavily on this single crop for their export income. What are the possible dangers for countries in this situation? What kinds of risks does relying on a single crop expose them to?

2 Do some further reading or use the Internet to research the coffee industry in one of the top producing countries. How has this changed in the last 10 years and who has been impacted by these changes?

WORLD: TOP 10 COFFEE PRODUCING AND CONSUMING COUNTRIES


United Kingdom
Belgium
Germany
Austria
Spain
Italy
Japan
Canada
United States of America
Tropic of Cancer
India
Vietnam
Ethiopia
Mexico
Honduras
Guatemala
Colombia
Equator
Indonesia
N
Peru
Brazil
Tropic of Capricorn
0
2500
5000 km
LEGEND
Top 10 coffee producers (million bags per year)
Over 20
5 to 7
7 to 20
Under 5
Top 10 coffee importers (US$million per year)
Over 2000
750 to 1000
1000 to 2000
Under 750

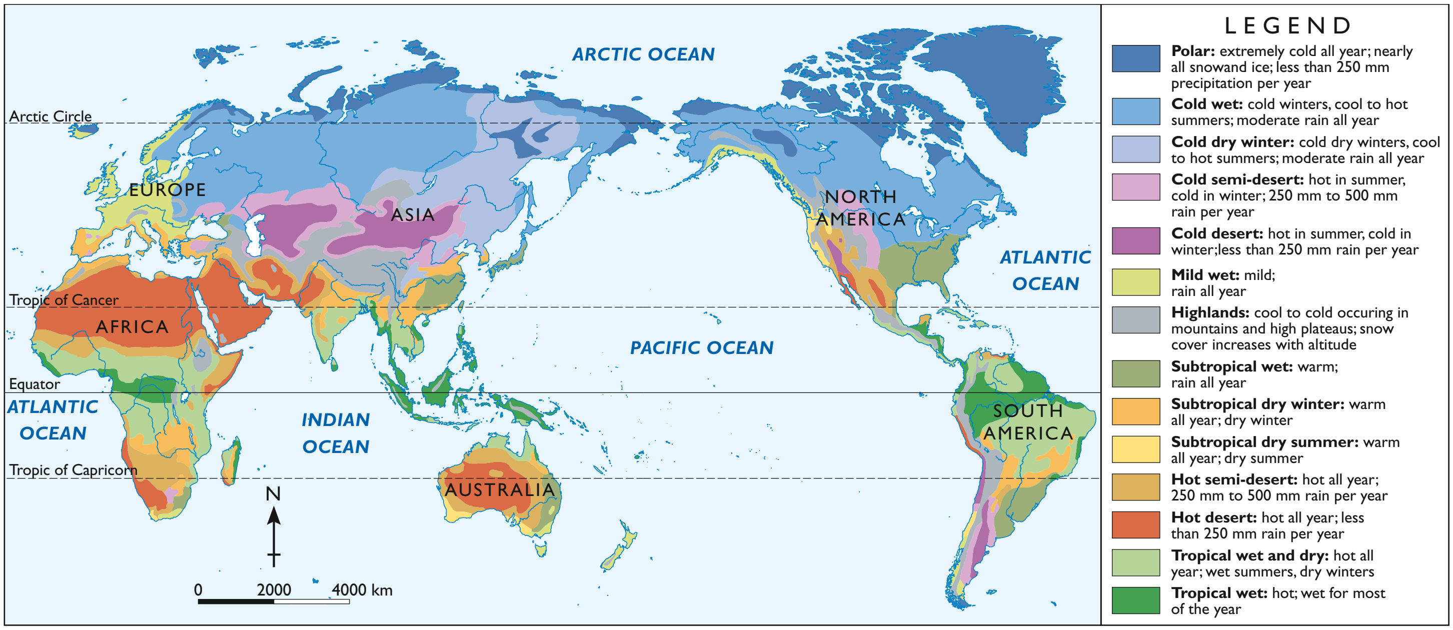
Source 2 Source: Oxford University Press

Source 3 This table shows the top 10 coffee-producing and importing nations in the world

Country	Annual production (in 000s of bags*)	Country	Annual imports (in US $ 000s)
Brazil	43 484	USA	4 121 228
Vietnam	20 000	Germany	3 344 098
Indonesia	8250	Italy	1 382 895
Colombia	7800	France	1 381 309
Ethiopia	6500	Japan	1 272 614
Peru	5443	Belgium	1 204 122
India	5333	Canada	789 431
Honduras	4500	Spain	752 415
Mexico	4300	United Kingdom	631 785
Guatemala	3750	Austria	454 791

* 1 bag weighs 60 kilograms. Figures, 2008

WORLD: CLIMATES


ARCTIC OCEAN
Arctic Circle
EUROPE
ASIA
NORTH AMERICA
ATLANTIC OCEAN
Tropic of Cancer
AFRICA
PACIFIC OCEAN
Equator
ATLANTIC OCEAN
INDIAN OCEAN
SOUTH AMERICA
Tropic of Capricorn
AUSTRALIA
N
0
2000
4000 km
LEGEND
Polar: extremely cold all year; nearly all snowand ice; less than 250 mm precipitation per year
Cold wet: cold winters, cool to hot summers; moderate rain all year
Cold dry winter: cold dry winters, cool to hot summers; moderate rain all year
Cold semi-desert: hot in summer, cold in winter; 250 mm to 500 mm rain per year
Cold desert: hot in summer, cold in winter;less than 250 mm rain per year
Mild wet: mild; rain all year
Highlands: cool to cold occuring in mountains and high plateaus; snow cover increases with altitude
Subtropical wet: warm; rain all year
Subtropical dry winter: warm all year; dry winter
Subtropical dry summer: warm all year; dry summer
Hot semi-desert: hot all year; 250 mm to 500 mm rain per year
Hot desert: hot all year; less than 250 mm rain per year
Tropical wet and dry: hot all year; wet summers, dry winters
Tropical wet: hot; wet for most of the year

Source 4 Source: Oxford University Press

5.8 Different types of tourism

What is tourism?

Tourism is the activities of visitors from all over the world paying money to travel and see places outside of their normal environment. Tourists can visit places for days, weeks, months or even just a single afternoon, moving between suburbs, states, countries or continents.

It is estimated that tourists spend around $A1 trillion annually (i.e. $A1000 billion). This revenue makes a valuable contribution to the economies of most countries around the world.

The United Nations World Tourism Organization (UNWTO) now estimates that the total number of tourists travelling each year will reach 1.8 billion by 2030. Asian countries such as India, Malaysia and Indonesia are expected to see the most rapid increase in tourist numbers over this time.

Tourists travel for many different reasons. Some simply want to relax on a beach, while others are keen to experience the culture, language and history of the places they visit. In order to understand the decisions different types of tourists make, and analyse the impacts that their decisions have on the environment, geographers tend to classify tourists into a number of groups. Source 1 examines five of the most popular types of tourism around the world.

Different types of tourism	
Recreational tourism 	Recreational tourism is perhaps the most well-known and popular type of tourism. Recreational tourists travel to have a good time, to relax, and to enjoy the attractions and activities on offer in the places they are visiting. Many recreational tourists spend their time relaxing on the beach, eating in restaurants, shopping or attending shows. Each year, around 39 million tourists flock to New York City to enjoy all of the recreational activities on offer there (see Source 1). **Source 1** Times Square in New York City is among the most popular destinations in the world for recreational tourists because of the many attractions there.
Historical tourism 	Historical tourists are generally interested learning more about important events that may have taken place in the past, by visiting the places where they happened. They visit important buildings, view artefacts and monuments and sometimes listen to stories from local experts. The Great Pyramid in Egypt, Stonehenge in England and Machu Picchu in Peru (see Source 2) are all popular destinations for historical tourists. **Source 2** Machu Picchu in Peru attracts visitors because of its historical significance. Up to 2000 people visit every day.
Wilderness tourism 	Wilderness tourists enjoy the challenge of visiting wild places such as the Amazon rainforest, Antarctica or the Himalaya. For these travellers, the lure of remote lands, rugged landscapes and even challenging weather conditions is much more attractive than a cosy hotel and a bit of sightseeing. The chance to visit places that relatively few others have and be exposed to the people and landscapes of these remote places makes wilderness tourism an attractive option for many, despite the potential risks involved. **Source 3** Climbers on Mount Everest wait for their turn to reach the summit. Climbers like these must wait up to two hours to reach the top of the mountain.

Different types of tourism

Ecotourism

Ecotourists typically travel to natural areas that are relatively undisturbed, and possibly fragile, to learn more about these special places in a socially responsible manner. Ecotourists try to minimise their impact and avoid damaging the environment in which they travel. They may even aim to improve the wellbeing of the land and those that live there. Some ecotourism raises funds for conservation (see Source 4), or goes to directly benefit the local communities in the places visited by tourists.

Source 4 In Central Africa, ecotourism brings about $20 million a year to the region – much of this is used to preserve the habitat of mountain gorillas.

Cultural tourism

Cultural tourists are interested in learning more about the culture of places (such as the religion, art, festivals and other components that shape a society) and experiencing a different type of lifestyle. For example, some cultural tourists travel to places like China or Singapore during the Chinese Lunar New Year holiday to experience the festivals, music and food of a culture that they cannot replicate at home.

Source 5 Fireworks are a popular highlight of Lunar New Year celebrations in China.

Check your learning 5.8

Remember and understand

1 How many tourists travel to a different country each year?

2 Which countries are expected to see the most rapid growth in the number of tourists over the next 15 years or so?

Apply and analyse

3 As a class, brainstorm examples of experiences and destinations under each of the four tourism types. Which one did your class know the most about? Why do you think this is the case?

4 Think about your last experience as a tourist.
  - a Classify your experience into one of the four tourism types discussed on these pages.
  - b Write a list of all the ways your last holiday had an impact on the places you visited.
  - c Classify these into the positives and negatives.
  - d Identify the places where the impact was felt.

Evaluate and create

5 One method to reduce the impacts of tourism is to give tourists a code of behaviour that outlines a number of rules and guidelines to follow.
  - a As a class, discuss the kinds of rules and guidelines that would reduce the impact of tourism on mountain gorillas such as those shown in Source 4.
  - b In pairs or small groups, design a brochure that you could give to tourists to educate them about the code of behaviour your class has come up with.

5.9 Impacts of recreational tourism

While some forms of tourism, such as ecotourism, may not appeal to everyone, travelling for recreation is massively popular. There are many destinations that people choose to visit for recreation, so the impacts vary widely. Some places become extremely popular as tourist destinations, and the concentrated number of visitors can have significant impact on both the natural and built environments there. For example, a beachfront that once attracted people for its sunshine and clean sandy beaches can all too quickly become overcrowded, and polluted if it is not carefully managed and cared for.

Case study: Cancun, Mexico

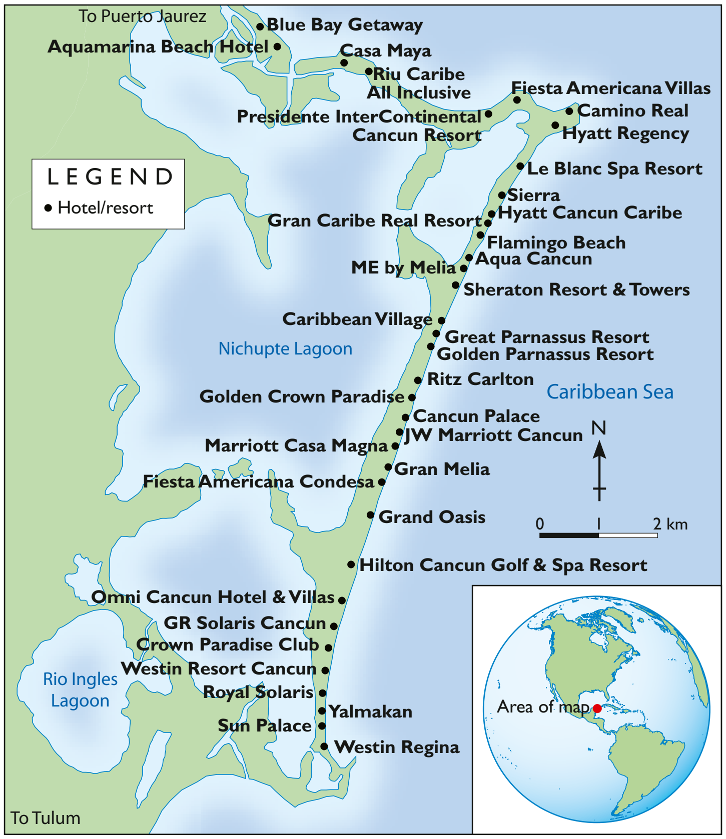
Many areas that were once wilderness have been changed to provide the things that tourists need and want such as hotels, airports, swimming pools and roads. On the Yucatan Peninsula in Mexico, for example, lies the tourist town of Cancun (see Source 1). Blessed with a spectacular coastline and warm temperatures, it attracts about two million visitors a year. Before it became a tourist destination, Cancun was a barrier island enclosing a massive shallow lagoon, the Nichupte Lagoon, which was an important nesting site for sea turtles and seabirds.

The lagoon was fringed by mangroves, which acted as a nursery for fish and other marine animals. As more tourists began to visit, causeways were built at both ends of the island to join it to the mainland. The causeways restricted how much fresh water was able to flow into the lagoon, changing the conditions of the ecosystem. In addition, sections of the lagoon were filled in, and 60 000 hectares of rainforest and mangroves were removed to make way for the development of hotels and resorts.

Native plants that once protected the coast and prevented erosion were replaced with non-native plants. There are far fewer fish and shellfish due both to the loss of their habitat and overfishing to feed the tourists. Large areas of coral reef are now dead or damaged as a result of the snorkelling and scuba diving. Boats and jet skis create pollution, while boat anchors can drag along the seabed, damaging coral and stirring up **sediment**, all of which have negative impacts on marine life.

Source 1 Tourist development in Cancun, Mexico

CANCUN, MEXICO: TOURIST AREA


To Puerto Jaurez
Blue Bay Getaway
Aquamarina Beach Hotel
Casa Maya
Riu Caribe All Inclusive
Fiesta Americana Villas
Presidente InterContinental Cancun Resort
Camino Real
Hyatt Regency
LEGEND
● Hotel/resort
Le Blanc Spa Resort
Sierra
Hyatt Cancun Caribe
Gran Caribe Real Resort
Flamingo Beach
Aqua Cancun
ME by Melia
Sheraton Resort & Towers
Caribbean Village
Great Parnassus Resort
Golden Parnassus Resort
Nichupte Lagoon
Ritz Carlton
Caribbean Sea
Golden Crown Paradise
Cancun Palace
JW Marriott Cancun
N
Marriott Casa Magna
Gran Melia
Fiesta Americana Condesa
Grand Oasis
0
1
2 km
Hilton Cancun Golf & Spa Resort
Omni Cancun Hotel & Villas
GR Solaris Cancun
Crown Paradise Club
Westin Resort Cancun
Rio Ingles Lagoon
Royal Solaris
Yalmakan
Sun Palace
Westin Regina
Area of map
To Tulum

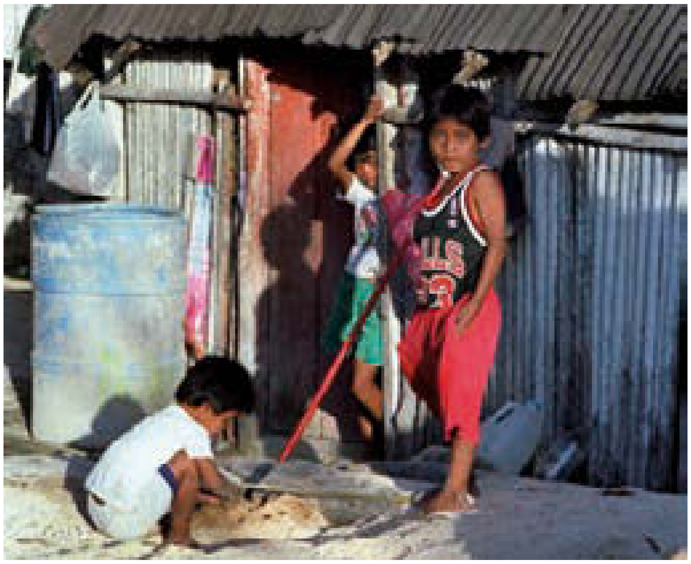
Source 2 Source: Oxford University Press

The increased numbers of tourists and residents (who work in hotels and restaurants and run tour companies) have also resulted in waste management problems. The lagoon has become polluted with sewage, petroleum products, heavy metals and chemicals from stormwater run-off and the boating marinas in the lagoon.

In addition to these negative environmental consequences, there are also negative social consequences. The rapid development in Cancun has put pressure on local resources, meaning the prices of food, energy, raw materials and land have risen. There is also increasing pressure to use agricultural land for the booming tourism industry.

When tourist **infrastructure** for Cancun was built, little provision was made for the additional residents needed to work in the industry. As a result, there are many slums that surround the area. People living in the slums have poor living conditions, with a lack of drinking water, waste management and other services.

Although the industry provides employment, tourism workers are often poorly paid. This leads to inequalities between resident workers and tourists, with some workers feeling resentment towards tourists and being forced into other illegal means of earning an income, such as selling drugs or prostitution.



Source 3 While tourists enjoy luxury accommodation in purpose-built resorts, living standards are very different for many of Cancun's workers and their children.

Check your learning 5.9

Remember and understand

1 Why do many tourists visit Cancun?

2 How has tourism benefited local people?

Apply and analyse

3 Investigate the natural environment of Cancun.

- a Describe the current environment. Use Source 1 to help you.
- b How has tourist development changed this environment? Use Source 1 as a source of information.
- c How have the activities and behaviours of tourists impacted on the Cancun region? Refer to particular places and activities in your answer.

4 Cancun has been described as 'a victim of its own popularity'. What does this mean? Do you agree with this statement?

5 Examine Source 3. What does this picture reveal about living conditions in the workers' villages?

Evaluate and create

6 Imagine that a new tourist development has been proposed for a stretch of coastline in Queensland that has a similar natural environment to Cancun. What lessons could the developers of this new resort take from the experiences at Cancun in order to reduce impacts on natural and built environments?

5.10 Impacts of historical tourism

While many modern-day tourist attractions such as theme parks and museums are built specifically to cater for tourists, most historic sites built long ago were never designed to cope with the demands of the growing numbers of visiting tourists. The interconnection between tourists and ancient buildings, for example, is having a disastrous effect on many of these historic sites in many locations.

Case study: Angkor Wat, Cambodia

Cambodia's 1000-year-old temples at Angkor Wat lay hidden from tourists for hundreds of years by the thick tropical jungle. Today, nearly three million tourists visit Cambodia every year, most of whom go to Angkor Wat. In 1995, there were eight hotels in the nearby town of Siem Reap. By 2013, there were more than 350, virtually all of them owned by foreigners. Many of the stone statues and steps of Angkor Wat are crumbling under the stress of millions of footsteps, and entire sections of the walls have collapsed. Pollution from hundreds of tourist buses threatens to corrode the fragile sandstone. The demand for water, including that needed to water two new golf courses built nearby, has resulted in ancient wells and moats drying up. Some researchers fear that drawing water from the ground may eventually result in the sinking and collapse of the ancient monument.

Source 1 Tourists scramble up the side of a temple wall at Angkor Wat, Cambodia.

Source 2 Tourists and buses at Giza's ancient pyramids

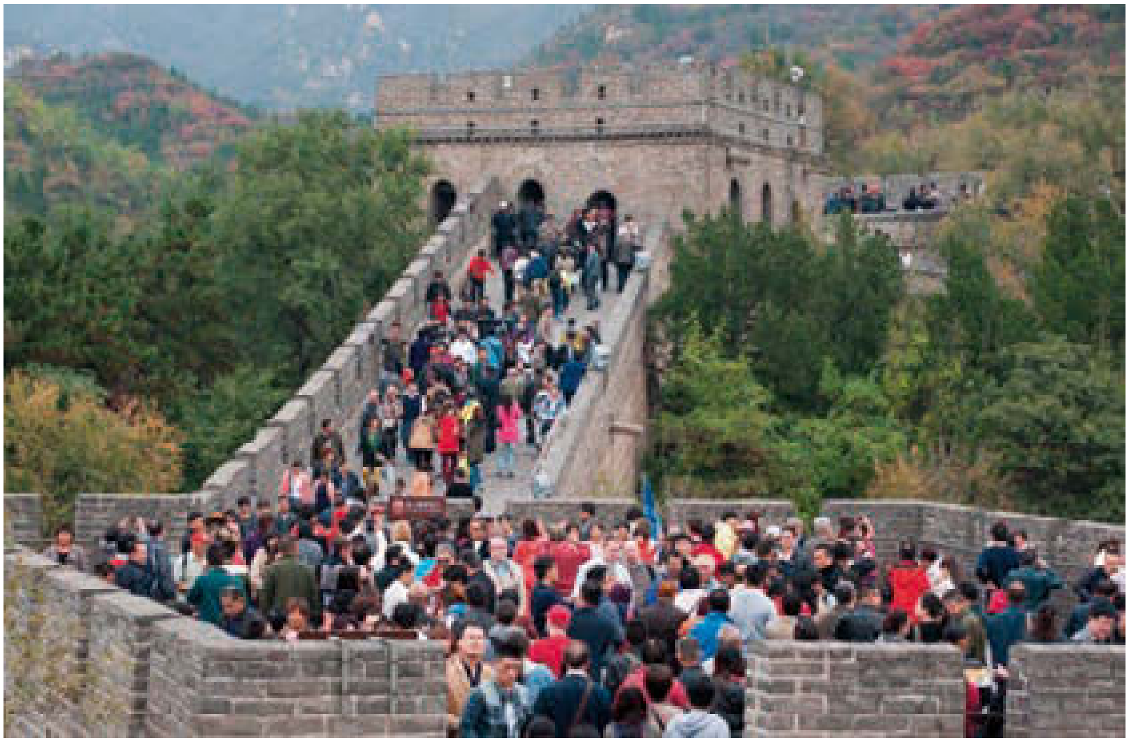
Case study: Pyramids of Giza, Egypt

The Pyramids of Giza, on the outskirts of Cairo in Egypt, are some of the most instantly recognisable buildings in the world. More than 4500 years old, they stand as a monument to human ingenuity. They have withstood centuries of desert erosion but are now threatened by mass tourism. Inside the tombs and pyramids, ancient paintings are being eroded by salt deposits that are caused by the sweating and breathing of tourists. Despite strict rules, some tourists touch the ancient paintings, which hastens their decay. The air pollution caused by the growth of Cairo's suburbs and the many tourist buses has corroded the pyramids' surfaces.

Case study: the Great Wall, China

The Great Wall of China was declared one of the Seven Wonders of the World in a public vote in 2007, and China is one of the fastest-growing tourist destinations in the world. Rapid economic growth and rises in living standards in China are allowing millions of Chinese people to own cars and visit places they could not previously access. These two factors are bringing even more people to the Great Wall every year. Unfortunately this is creating many problems for this ancient structure.

In some heavily visited sections virtually every stone has been defaced with graffiti and some tourists even take pieces of the wall as souvenirs. Cars are sometimes driven along the wall, rave parties are held on it, and parts have been torn down to use for building materials or to create space for other developments. It has been estimated that only one-third of the wall still stands, the rest having been torn down or eroded away.



Source 3 Crowds, such as those shown here, flock to the Great Wall of China during national holidays in China.

Check your learning 5.10

Remember and understand

1 List the ways in which tourists change the ancient structures described on these pages.

2 Why is water supply an issue for Angkor Wat?

Apply and analyse

3 Why is the impact of tourism on ancient places such as these likely to worsen in the future? Can you think of any likely impacts for each of the places shown here in addition to the ones already described?

4 Examine Source 1. How are these tourists impacting on Angkor Wat? Are these impacts also likely to occur at the Egyptian pyramids or the Great Wall?

5 What are some of the positive impacts of tourism that may occur at each of these three historic sites?

Evaluate and create

6 The case studies presented focus on the impact of mass tourism on the built environment. Brainstorm ways in which tourism can impact on other aspects of the human environment such as language, culture and religion.

7 Do some further research about the impact of tourism on one of the three historic sites mentioned here. Prepare a PowerPoint presentation about what you discover and present it to the class.

5.11 Impacts of wilderness tourism

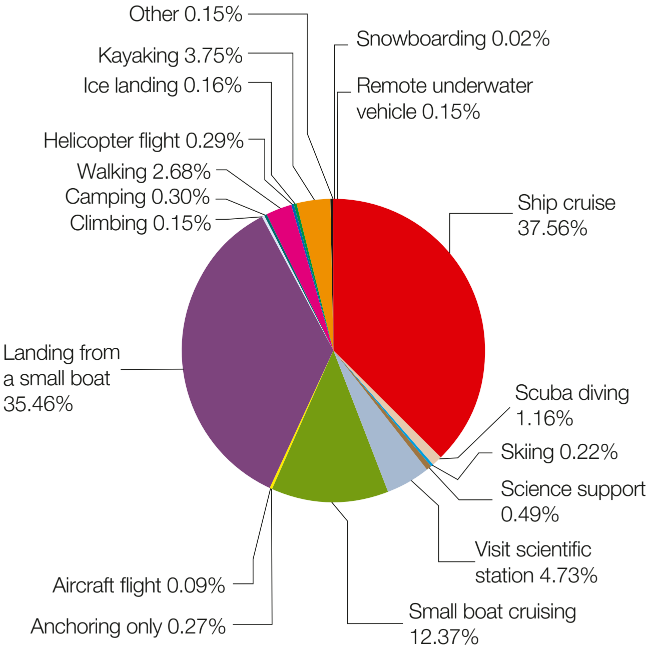
Many tourists are drawn to wilderness areas to experience natural sights and events. Well-known examples of wilderness tourist destinations include Uluru in Central Australia, the Grand Canyon in America, and the Serengeti in Africa, where many people travel to go on wildlife safaris. Wilderness tourists, and the facilities built for them, can bring great change to natural environments.

Case study: tourism in Antarctica

Antarctica is the world's last great wilderness and a land of extremes. Located at the most southerly point of the Earth's surface, it is the highest, coldest, driest, windiest and most isolated continent. This makes it one of the least visited places on Earth. Despite being about twice the size of Australia, Antarctica receives only 26 000 tourists a year compared to Australia's 5.8 million visitors.

Most visitors to Antarctica travel on cruise ships from South America and visit a few sites on the Antarctic Peninsula. They come to marvel at the unique wildlife, the pristine condition of the natural environment and the stunning scenery. Nearly 40 per cent of these tourists are from the United States. Australians make up only 8 per cent of tourists to Antarctica.

Source 1 Passengers from a cruise ship photograph the Antarctic coast.



Source 2 Tourist activities in Antarctica

People usually visit Antarctica for only short periods but their visits usually take place at that same small number of sites. This leads to a long-term cumulative impact. Tourists also tend to visit the places with the most wildlife, which has the potential to disrupt the animals' normal way of life. The fragile environment means tourism in Antarctica has to be carefully controlled and managed. It is particularly difficult to manage environmental problems, however, as there is no government, police force or park rangers to manage impacts and control behaviours.

Potential impacts from wilderness tourism

- Disturbance of wildlife, especially as most tourists are taken to penguin and seal colonies by small boats from large cruise ships.
- Oil spills from cruise ships. Rubbish and waste from ships also pose a problem.
- Difficulty in rescuing people involved in medical or other emergencies.
- Introduction of foreign species to Antarctic waters from water carried as ballast on cruise ships.
- Tourists can also damage plant life, such as by trampling slow-growing beds of moss.

Protection

Tourism in Antarctica is self-regulated by the International Association of Antarctic Tour Operators (IAATO). The association has strict guidelines for its members and their ships, such as limiting the size of ships allowed into Antarctic waters. The numbers of people that can land at sites are also limited. The association is seen as being successful in managing tourism in the area; after all, if damage to Antarctica occurs, the attractiveness to tourists will be lost. Membership of IAATO, however, is not compulsory, and there is still the possibility of businesses that don't belong to the association bringing in larger ships carrying more people and causing more damage. This has not happened so far but, if it did, nothing could be done to prevent it as there are no international laws governing the area.

The future of Antarctic tourism

While virtually all tourists currently access Antarctica by boat, this may be about to change. The Australian government has spent $46 million to put a regular air service in place between Hobart and Casey Station in Antarctica. This has meant the construction of a reliable runway on a 700-metre-thick glacier. Airbus A319 planes have been modified with long-range fuel tanks added so that a return flight to Hobart can be made without refuelling. This minimises the chances of a fuel spill in the pristine environment.

The service will be for scientists and researchers working from the Australian bases in the summer months and will reduce the current three-week sea journey to a four-and-a-half-hour flight. This will allow more scientists to visit Antarctica.

While tourist flights from Australia currently do not land in Antarctica, the technology used to construct this runway may be employed by tour operators in the future. It is important to remember, however, that Antarctica remains a challenging environment to visit and this will always keep the number of tourists relatively low.

Check your learning 5.11

Remember and understand

1 Why do so few tourists visit Antarctica?
2 Would you like to visit Antarctica? Give some reasons for your answer.

Apply and analyse

3 Examine Source 2.
  a What are the two most popular activities in Antarctica?
  b What are some of the potential environmental impacts of these activities?
  c What percentage of tourists take a flight in an aircraft?
  d Why might this percentage increase in the future?
4 Discuss some of the potential and real environmental impacts of aeroplane flights to Antarctica.

Evaluate and create

5 Design a poster that will be displayed in the rooms of a cruise ship that will sail to Antarctica. Your poster should outline a code of behaviour for tourists who will travel on the ship, to educate and guide them on how to reduce their environmental impact. Because not all passengers will speak the same language, you will need to use pictures and symbols rather than words on your poster.

Source 3
The passengers and crew of the first flight from Hobart to Antarctica in 2008 gather beside the runway. In the centre of the front row is Peter Garrett, Australia's environment minister at the time.

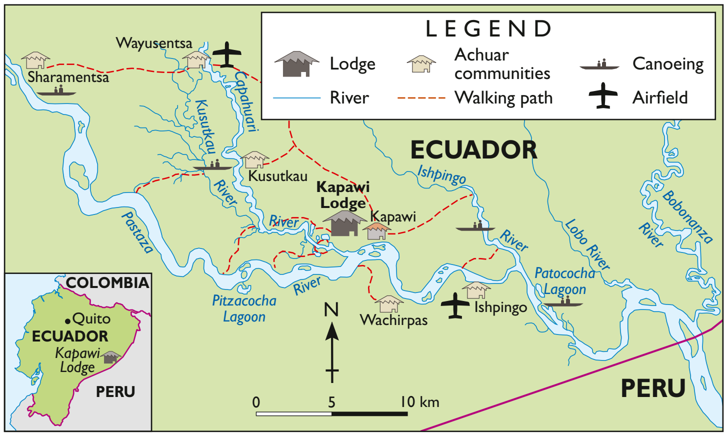
5.12 Impacts of ecotourism

Many tourists are becoming aware of the impacts of their travel on people and places they visit. As a result, many of them have started looking for opportunities to reduce these impacts. In response to this growing awareness, many destinations are developing ecotourism options. These tend to be nature-based, educational and designed to have a minimal impact on the environment. Ecotourism is now one of the fastest growing tourism sectors.

Case study: Kapawi Ecolodge, Ecuador

The Kapawi Ecolodge and Reserve is located in the Amazon Basin, 250 kilometres south-east of Quito (see Source 2). It is close to the border of Ecuador and Peru on the Pastaza River, a major tributary of the Amazon. People can really only reach Kapawi by air or by a three-day canoe trip – it is a 10-day walk to the nearest town. Because of this, Kapawi is one of the most pristine and remote areas of the Amazon Basin. It is also one of the most biologically diverse areas on Earth with 10 000 species of plants and more than 570 species of birds. The lodge is located in the territory of the Indigenous Achuar people, which covers 5000 square kilometres and is home to 6000 Achuar.

ECUADOR: TOURIST MAP OF KAPAWI ECOLODGE


LEGEND
Lodge
Achuar communities
Canoeing
River
Walking path
Airfield
Wayusentsa
Sharamentsa
Capahuari
Kusutkau
Kusutkau River
ECUADOR
Ishpingo River
Kapawi Lodge
Kapawi
River
Pastaza River
Lobo River
Bobonaza River
Patococha Lagoon
Pitzacocha Lagoon
N
Wachirpas
Ishpingo
0
5
10 km
PERU
COLOMBIA
Quito
ECUADOR
Kapawi Lodge
PERU

Source 2 Source: Oxford University Press

The Kapawi project began in 1996 as a partnership between Conodros (an Ecuadorian tour company) and the Achuar people. They wanted to start a sustainable business that would preserve the unique cultural and environmental assets of Ecuador's Amazon Basin. Conodros provided the initial funding, management and technological expertise to get the project started. Full management of the project was handed over to the Achuar on 1 January 2008. They now have total ownership and responsibility for the Kapawi Ecolodge and Reserve. As management of the environment is an ongoing process, Kapawi continues to strive to improve management processes, and involves guests in this too.

Source 1 Kapawi Ecolodge, deep in the Amazon rainforest

Source 3 Achuar people teach tourists staying at the Kapawi Ecolodge about the biodiversity of the Amazon rainforest.

Before Kapawi, most of the Achuar had earned money from raising beef cattle. This agricultural activity causes significant damage to the environment. Today, members of the 56 Achuar communities earn a significant percentage of their income from ecotourism. For the communities near the lodge, up to 60 per cent of their total income comes from direct employment at the lodge, supplying products and selling handicrafts.

Leave nothing but footprints, take nothing but photographs

The lodges at Kapawi are built using traditional Achuar architecture techniques combined with modern technologies. This includes building on stilts to minimise the impact on surrounding vegetation. All soaps, detergents and shampoos used are biodegradable. Sewage goes through a three-step drainage process. Plastic, glass and metal waste is packed and taken away to be recycled. Paper waste is burned. Biodegradable garbage is composted. Batteries are collected and taken to countries with recycling facilities. The entire lodge is powered by a hybrid system of solar energy and a diesel generator. Showers have solar-heated water.

Tourists who visit Kapawi can take part in many activities, including hiking, bird-watching, visits to local Achuar communities, learning about traditional foods and medicine, camping and canoeing.

Kapawi Ecolodge is a successful sustainable tourism business. Tourism has been managed so that the environment and the culture of the Achuar people can be maintained. In addition, the Achuar people have found sustainable ways to become part of the world economy while still maintaining their traditions.

Check your learning 5.12

Remember and understand

1 Describe the location of the Kapawi Ecolodge.
2 What are some of the interconnections between the Achuar people and people from other places?

Apply and analyse

3 Copy and complete this table to list some of the ways in which environmental impacts are minimised at Kapawi:

Features of buildings	Tourist behaviours	Reducing waste

4 How does the isolation of the ecolodge help in minimising its environmental impacts?
5 Ecotourism can be defined as 'responsible travel to natural areas that conserves the environment and improves the wellbeing of local people'. Do you think that the Kapawi Ecolodge is an example of ecotourism? Give three reasons for your answer.

Evaluate and create

6 Compare the tourist developments at Kapawi (see Source 1) and Cancun (see Source 1 on page 186). What are the key differences? Discuss which of these types of development is most likely to represent the future of tourism. What will this mean for environmental impacts in the future?

5.13 The effects of tourism in the future

Tourism is an industry that is constantly changing. Geographers who research tourism and leisure have identified the following trends that will shape the ways in which people and places are impacted by tourism in the future.

Trend 1: more people travelling more often

Tourist numbers are expected to continue to increase. By 2030, the number of international travellers will reach 1.8 billion per year if current trends continue. As some places become too crowded tourists are expected to look for new destinations to offer them the experiences they want. This gives new places the opportunity to benefit from the resulting tourism, which provides a significant boost to an economy. However, it also makes them vulnerable to negative impacts on the environment and their culture.

In many places where profits are put ahead of minimising impacts, tourism has brought environmental degradation and a loss of traditional ways of life. As many communities in developing countries rush to attract tourists, many geographers are concerned that the lessons from places such as Cancun, Angkor Wat and Giza will be forgotten.

Trend 2: increased awareness of environmental issues

More travellers are becoming concerned about their impact on the places they are visiting. Many are choosing their destinations partly because of environmental qualities such as conservation. Mass tourism to large resorts such as those at Cancun, however, still dominate in some countries. Ecotourism, though, and nature-based tourism are growing two to three times more quickly than tourism as a whole. There are many popular destinations for conservation-aware tourists including parts of Australia, and Africa, which has stunning landscape and the chance to see wildlife in its natural environment.

Source 1 Namibia is predicted to be the 'next big thing' in African safari tourism as traditional areas in South Africa, Kenya and Tanzania become too 'busy' for many travellers.

The Internet has allowed people to learn more about destinations before they travel and this trend is expected to continue. Places that are becoming degraded are becoming less popular as tourists pass on their negative experiences through travel websites. This may result in greater efforts in these places to repair environmental damage and for future developments to be more environmentally friendly.

Trend 3: travellers want 'real' experiences

There has been a significant growth in the number of people who are looking for authentic places and experiences rather than artificial ones that have been created specifically for tourists. One of the fastest growing types of travel experiences is known as adventure tourism. This includes the 'adrenaline junkies' who want extreme experiences such as mountaineering, white-water rafting and rock-climbing as well as those who want gentler physical experiences such as hiking and biking.

For many tourists, the experiences they have are becoming more important than the places they visit. Many are looking to interact with local people and to experience their culture away from the packages offered by large hotels and tour companies. Adventure tourism allows them to move out of mass tourism and have an individual experience. Where this has occurred it seems to impact people and places much less than mass tourism and can lead to a better understanding of cultures and environments.

Other trends

In addition to these trends described above, many others have been observed.

- Trips are becoming shorter but tourists are spending more.
- Twice as many people now book their travel on the Internet than use a travel agent.
- Growth in the number of tourists from Asia is larger than from any other region.
- There is a surge in 'niche' tourism: small numbers of people travelling for unusual reasons. This includes medical tourism, when people travel to another country for surgery and other medical procedures. Already worth up to $60 billion a year, medical tourism is growing at 20 per cent a year.

There is also an increased demand for 'accessible tourism' for the 10 per cent of the population with a disability (see Source 2).

Source 2 Tourism catering for disabled people is a growing industry.

Check your learning 5.13

Remember and understand

1 How has the Internet changed travel and tourism?
2 What is adventure tourism?

Apply and analyse

3 Make a list of those factors and trends that may result in tourism having a greater impact on the environment in the future. Make another list of those factors and trends that suggest that tourism will impact less on the environment. Which of these two outcomes do you consider most likely? Give some reasons for your answer.
4 Examine Source 1.
  a Why do you think these tourists have visited this place?
  b How has this visit impacted on the natural environment?
  c How will these impacts increase if the number of tourists to Namibia greatly increases?

Evaluate and create

5 Imagine that it is 2050 and that you are a reporter for an online newspaper. Write an article describing the ways in which tourism has changed in the last 35 years or so (since 2015). You could describe a typical 2050 holiday and include an advertisement for a typical 2050 destination.

5B rich task

Tourism at Gallipoli

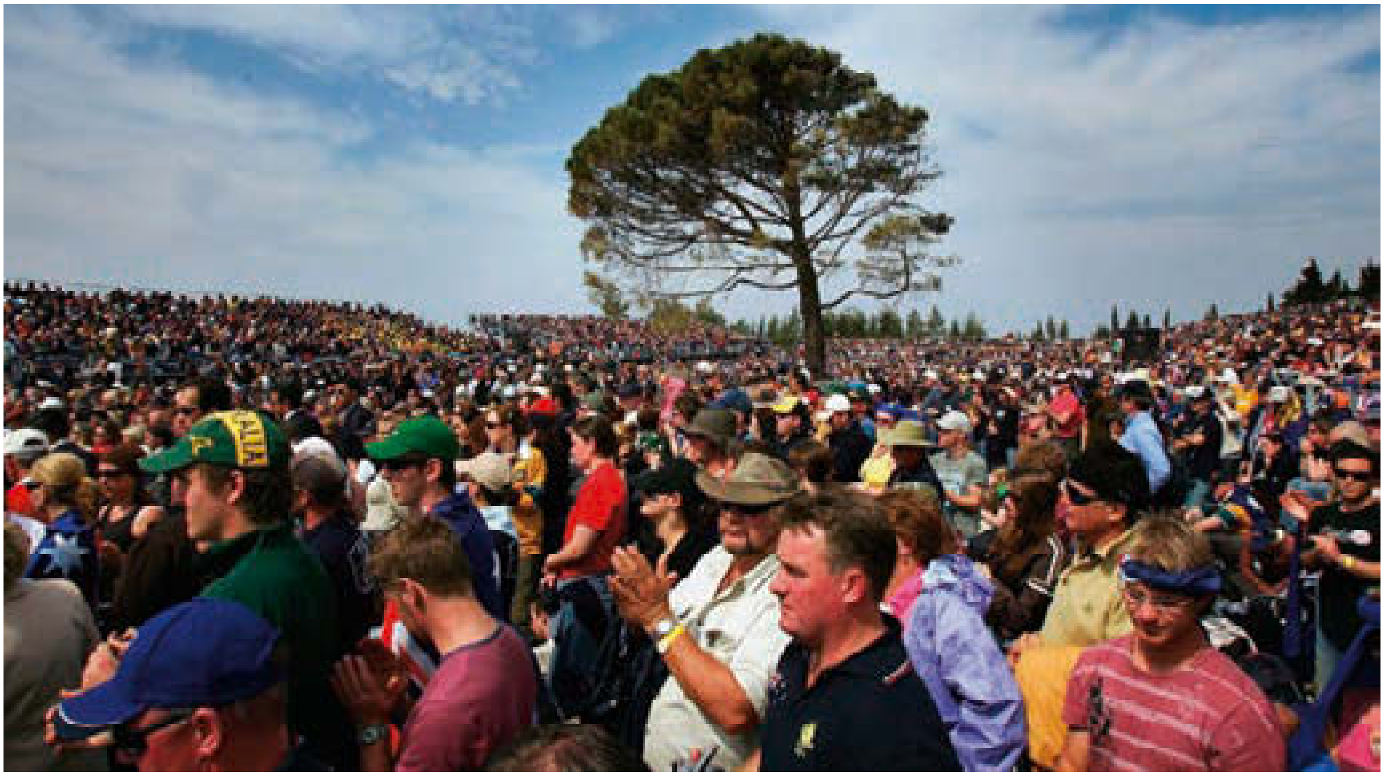
On 25 April 1915, Australian and New Zealand troops fighting in World War I landed on the Gallipoli Peninsula. The battle lasted about eight months and claimed the lives of around 8000 Australians. It is seen by many as a milestone event in our nation's history. Thousands of Australians visit Gallipoli every year to pay their respects to the soldiers who fought there and to see this famous place for themselves.

While a few busloads of visitors arrive at Anzac Cove on an average day, on Anzac Day, the anniversary of the landing, tourist numbers increase dramatically. This gained popularity in 1990 when then Prime Minister Bob Hawke attended the dawn service and declared that 'Gallipoli is, in one sense, a part of Australia'. Anzac Day dawn services at Anzac Cove and Lone Pine now attract up to 10 000 people, most of whom sleep on the ground the night before the service.

To cope with visitor demands during this busy time, bus movements on the narrow winding roads are restricted, temporary grandstands are erected and a special group of Australian volunteers clean up rubbish once the visitors depart.

While many Australians see a visit to Gallipoli on Anzac Day as their right, others believe that the sheer number of visitors degrades the environment and demeans the memory of those who fought there. Some guidebooks are now recommending that tourists not visit on Anzac Day but go on other, less busy days instead. There are some who hold the view that perhaps Australians shouldn't be going there at all, or at least should be better informed about the Gallipoli Campaign.

Visiting Gallipoli on Anzac Day has become, among other things, a geographical issue. This is because the landscape itself is fragile, and the size of Anzac Cove, some feel, cannot support the number of visitors that descend on the Cove at once on Anzac Day. It is also an issue because people have different points of view. This is often the case in geography and comes about, in part, because people have different reasons for connecting to places.



Source 1 Tourists attending the Anzac Day service at Lone Pine cemetery, Gallipoli

skill**drill**

Interpreting qualitative data about geographical issues and events

Geographers need to consider different points of view, and the reasons behind these different viewpoints, when evaluating a geographical issue or event. They may use **qualitative** or **quantitative data** when doing this.

When presented with qualitative data like news pieces, blogs or research articles, geographers will examine the opinions in these sources, evaluate the sources and the motivation behind them, and analyse the issue or event using this information.

Follow these steps when interpreting qualitative data related to a geographical issue or event.

Step 1 Identify the issue you wish to investigate.

Step 2 Gather the relevant sources of qualitative data.

Step 3 Carefully read each source. Highlight or take note of the following:

- What do you know about the person who expressed this opinion?
- What possible bias may this person have about this issue?
- What is their opinion on this issue?
- What evidence or information do they use to support their opinion?
- Why did they write or publish the piece? For example, were they paid to write it?
- Who is the target audience?
- What result do you think the writer wants? For example, do they want to sway public opinion or change a current practice?
- Is the source reliable?

Step 4 Using your answers to the questions above, examine the motivation behind the piece. Is the person approaching the issue from a historical, economic, cultural or social perspective?

Step 5 Analyse the issue by comparing the different points of view provided in each source. You can ask questions like these to help you do this:

- What are the main points raised about the issue?
- Is there anything that the writers agree on?
- What are the main points on which they disagree?
- How does their perspective (historical, economic, cultural or social) influence their opinion?

Apply the skill

Following the steps provided, examine each of the four following sources which express different points of view about visiting Gallipoli on Anzac Day.

1. Do you think Virginia Maxwell (see Source 2) is writing from a historical, economic, cultural or spiritual perspective? Why do you think this? List your reasons.
2. Describe the issues surrounding visiting Gallipoli in your own words. Use the key concepts of environment and place in your description.
3. Compare the pieces written by Shelley (Source 5) and Erin (see Source 6) in their blogs.
   a. How do you think a discussion between Erin and Shelley might go if they were to meet? Write a short dialogue based on the conversation they might have about their views on Gallipoli.
   b. With a partner, present your dialogue in a role play for the class. Be prepared to stay in character and answer questions from your classmates about your feelings on Anzac Day.
4. Why do you think people can have such different points of view about geographical issues? Identify another place you think people might have different viewpoints about and list the possible reasons for this. You could research somewhere like Cronulla Beach in Sydney, for example, or the Franklin River in Tasmania if you are stuck for a place to write about.

Source 2

> It's important to remember that this site is just as significant and important for the Turkish people as for the Australians, the New Zealanders and the British. Visitors who come at other times than on Anzac Day get a much better chance to do some quiet reflection, get the full historical context from the tour guides and get the Turkish perspective on the battle as well. This is something that you won't get on a crowded overnight package trip from Istanbul, which is how most people end up seeing the site. It's also easier to find accommodation at other times, and avoids damage to the park, which is fragile.
>
> Virginia Maxwell, co-author of the *Lonely Planet: Turkey* guide

Source 3

Instead of commemorating the heroism of Australian soldiers who landed on that fatal shore in 1915, the conference in October concluded that Australians should reframe the landing as an unmitigated disaster and apologise to the Turkish Government for invading their country.

'The landing was nothing but an unjustified invasion of foreign soil like the British invasion of Aboriginal land in 1788,' says John Lack of the University of Melbourne. 'And we should put the two coves together – Sydney Cove and Anzac Cove – because both invasions were just as bad as each other and cost a lot of lives.'…

John McQuilton of Wollongong University says Australians should look at the story of Gallipoli from the Turkish angle to see how they feel about it, a view that has been neglected for too long. The Turks lost 86 000 soldiers compared with Australia's 8709. 'It is now time to embrace our old enemy Turkey,' he says. ….

McQuilton says Australians should stop going to Gallipoli and claiming rights over Turkish soil for their commemorative activities. 'This land belongs to Turkey and the reason they are building so many memorials of their own is they want it back,' he says.

'Charge of the rewrite brigade,' by Jonathan King

http://www.battleforaustralia.org/battaust/AustInvasion/References/Stanley_on_Gallipoli.html

Source 5

We will never forget. The journey that we were privileged to experience on the Gallipoli peninsula was incredible! A journey of both heart-gripping and breathtaking emotions as well as a surreal pilgrimage; a tiny glimpse of what the Anzacs went through on the 25th April, 1915. …

We embarked on a 5-day tour with Top Deck, discovering a quick peek of Istanbul and Gallipoli. … it's fair to say that we left our hearts on the shores of the Gallipoli National Park, with the many remaining there. Men of bravery, men of obedience, and men, who courageously and heroically left family, loved ones and their country behind.

… if you ever do get a chance to go to Gallipoli, especially over Anzac day, I would highly recommend it, as it really is (as cliché as it sounds) a life-changing experience.

It was an honour and an eye-opening adventure to be able to stand in the place where thousands had been laid to rest. What a memory to carry. We all walked out of the experience, knowing that we will never think of Anzac day the same. Lest we forget.

Shelley, attended the Anzac Day service,
Gallipoli, 2013

http://thesharechair.blogspot.com.au/2013/05/Anzac-day-gallipoli-lest-we-forget.html

Source 4 For many tourists, a visit to Gallipoli at a quiet time allows them to connect more closely with this place.

Source 6

> I have had this rant to all of my mates who go to Gallipoli for Anzac Day.
>
> It is a problem when Anzac Day starts to resemble the Big Day Out. There are the bogans draped in the Aussie flags who have been up all night. There are the stages, the microphones, the cameras, the celebrities, the spotlights, the lead up that could confuse the upcoming rendition of the 'Last Post' with an upcoming rock band. There are the people who have fought online and forked out hundreds for tickets. And now, there will even be ballots.
>
> Erin, in her blog 'Lessons for the 20s something wanderer'
>
> http://lessonsforthe20somethingwanderer.blogspot.com.au/2013/04/lesson-28-why-im-not-at-gallipoli.html#!/2013/04/lesson-28-why-im-not-at-gallipoli.html

Extend your understanding

1 Research the environmental impact that visitors are having at Gallipoli, and the ways in which local authorities are responding. Present your findings in a short written report.

2 Design a code of behaviour for visitors attending Anzac Day services at Gallipoli, to help them minimise their impact on the environment.

3 Write a few paragraphs or a short speech about attending Anzac Day services at Gallipoli, framing your viewpoint from a single perspective (historical, economic, cultural or spiritual). For example, you might write your piece from the economic perspective of a tour bus operator to Gallipoli.

Source 7 View of soldiers attacking during the final days of the Gallipoli Campaign in 1915

part 2

history

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Concepts and skills

The history toolkit

History is the study of the past. Historians seek to piece together pictures of what life was like in days gone by. They also look for patterns – what has remained the same, what has changed and why.

Historians follow a process of **historical inquiry** in order to understand the past. They ask questions, form opinions and theories, locate and analyse **sources**, and use evidence from these sources to develop an informed explanation about the past. Oral accounts, documents, **artefacts** and **archaeological** finds form the basis of research and investigation in history.

Historians investigate important events from the past and want to know more about them. To help in their investigations, historians use a range of concepts and skills. Each of these is like a tool that can be used to help you understand how events that took place in the past have influenced our modern world. As you master the concepts and skills, you will gradually fill your toolkit. Welcome to the wonderful world of history!

6A

What are the historical concepts?

6B

What are the historical skills?

chapter 6

Source 1 This photograph – taken during the Gallipoli campaign of World War I in 1915 – shows the Australian camp at Anzac Cove in Turkey. Today, Anzac Day is one of Australia's most important national commemoration days. It marks the anniversary of the landing of Australian and New Zealand forces at Anzac Cove during World War I.

6C

What are the career opportunities for historians?

6.1 Historical concepts

Historians use seven concepts to help them investigate and understand the past. At times you will use several of these concepts at once; at other times you may focus on just one. As you learn to apply each concept, you will begin to think like a historian. The seven key concepts in history are:

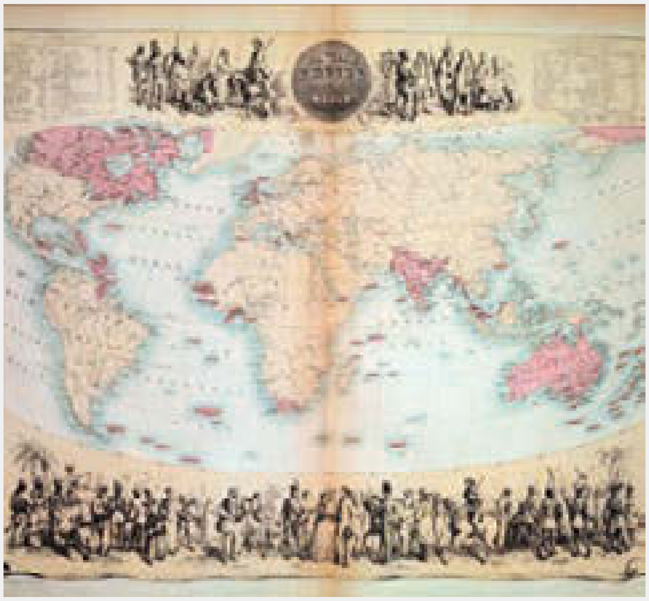
- perspectives
- continuity and change
- cause and effect
- evidence
- empathy
- significance
- contestability.

Perspectives

The concept of perspectives is an important part of any historical inquiry. A person's perspective is their point of view – the position from which they see and understand events going on in the world around them. People often have different points of view (or perspectives) about particular events, historical figures, civilisations or artefacts depending on their age, gender, social position and their beliefs and values. Just like anyone else, historians have perspectives, which can influence their interpretation of the past and the ways in which they write about it. Regardless of their own perspectives (and what they may think about something personally), historians must try to understand the different values and beliefs that shaped and affected the lives of people who lived in the past.

For example, the period from 1750 to 1914 was a time when the European powers competed with each other to expand their territories and influence around the world by acquiring colonies. This was known as **imperialism**. The European powers spread their reach over Asia, Oceania and Africa, desperate to get hold of the valuable natural resources found in these countries. By the beginning of the 20th century, most of Asia and Africa were ruled by foreign powers.

European **colonies** were forced to adopt the laws, languages, customs and religions of their imperial masters. Over time, Europeans also shared new technologies with their colonies. They established roads, railways and communication networks, modernising many of these nations.



Source 1 By the beginning of the 20th century, the British Empire covered one-quarter of the world's total land mass and ruled over around one-fifth of the world's total population. For these reasons it became known as the 'empire on which the sun never sets'.

From the perspective of most Europeans at the time, the Indigenous cultures of Asia, Oceania and Africa were inferior. They saw it as their right and duty to bring European culture and belief systems to the 'backward' societies they colonised.

From the perspective of the Indigenous populations in these regions, the arrival of Europeans was seen as an invasion of their lands that resulted in the devastation of their traditional ways of life. In the worst instances, as with Belgian rule in the Congo, the Indigenous population was subjected to a brutal, violent rule with a great loss of life.

Continuity and change

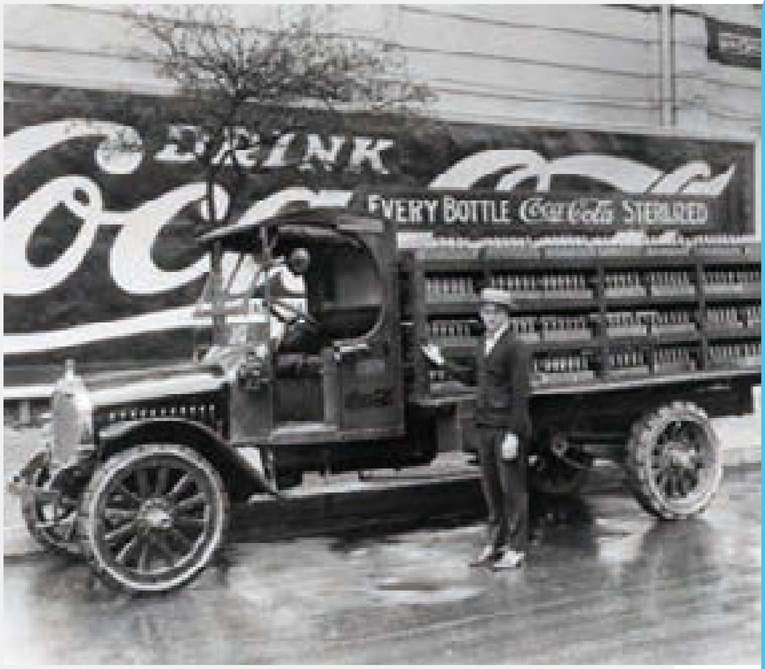
Historians recognise that, over time, some things stay the same, while others change. This concept is referred to as continuity and change. Examples of continuity and change can be seen across every civilisation at any given period of time.

Historians refer to aspects of the past that have remained the same over time as continuities. Aspects of the past that do not stay the same are referred to as changes. Change can occur within a certain civilisation or specific time period, but also across different civilisations and time periods.

Many aspects of history influence how we act and live today. For example, during the **Industrial Revolution**, a number of companies began producing products that have now become household names all around the world. One of these brands is Coca-Cola. This syrupy, carbonated cola drink made to a secret recipe was first produced by a pharmacist named Dr John S Pemberton in the United States city of Atlanta. The Coca-Cola logo (see Source 2) has been used in a distinctly recognisable form since 1885. This is an example of historical continuity.

However, Coca-Cola also provides many examples of historical change:

- During the first year, sales averaged a modest nine servings per day in Atlanta. Today, daily servings of Coca-Cola beverages are estimated at 1.8 billion globally.
- The first servings of Coca-Cola were sold for 5 cents per glass, whereas today a can of Coke generally retails for around 2 dollars.
- In the early years, Coca-Cola also contained cocaine from coca leaves. When cocaine became a restricted drug in the United States, the coca leaves used in the recipe were changed to be cocaine-free.
- In 1985, the company introduced a new formula and branded it 'new Coke', but a consumer backlash forced a return to the traditional recipe.
- Recent awareness about the dangers of a high consumption of sugar has seen the introduction and success of sugar-free options such as Diet-Coke and Coke Zero.



Source 2 A Coca-Cola delivery driver and his truck, New Orleans, 1929

Coca-Cola
Coca-Cola life
Coca-Cola zero
Coca-Cola light

Source 3 Today, Coca-Cola is available in more than 200 countries and is one of the world's most recognisable brands. It is also available in a number of different varieties to suit the changing wants of customers.

Cause and effect

The concept of cause and effect is used by historians to identify chains of events and developments, both in the short term and in the long term. Cause and effect aims to identify, examine and analyse the reasons why events have occurred and the resulting consequences or outcomes. It helps to think of cause and effect as the 'why' and 'what' of history.

Sometimes the link between cause and effect is very clear. For example, heavy rain over many weeks (cause) leads to flooding and the destruction of crops (effect). However, often this link is not quite so obvious. Generally, there are many causes (reasons) that lead to an event or action. There can also be many effects (outcomes). Sometimes the effects are simple to identify, while in other cases they are more difficult to predict and may not even become obvious until long after the event.

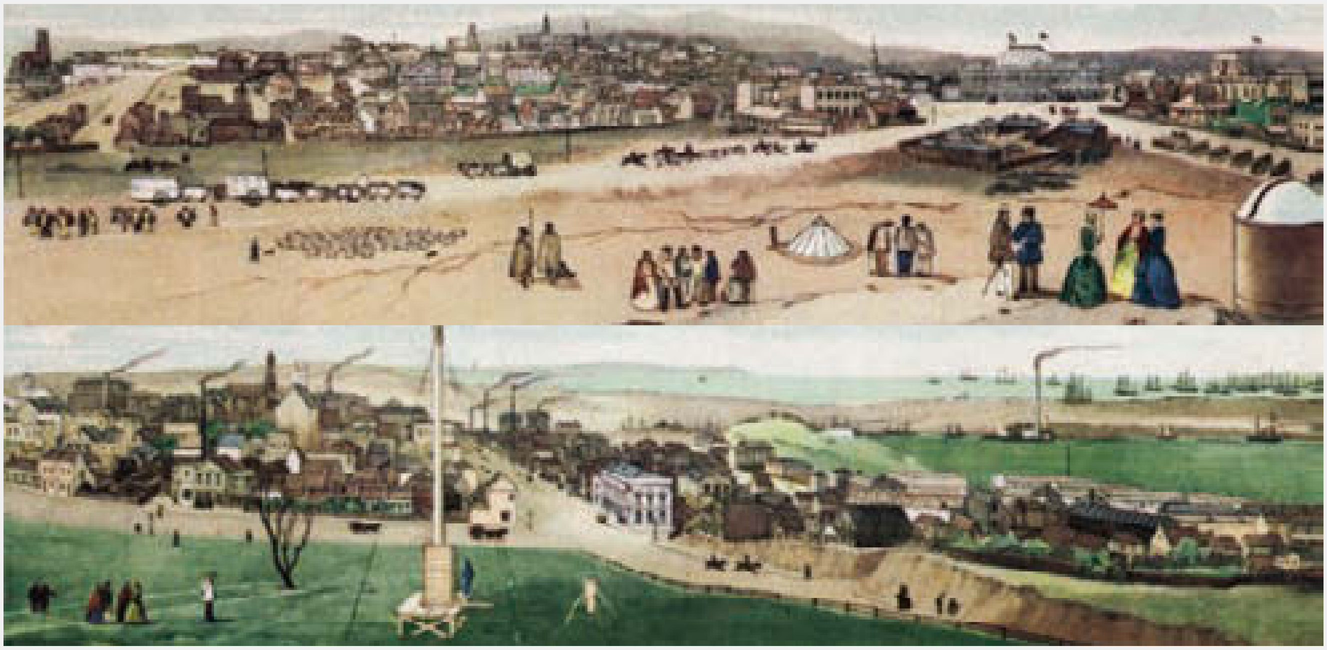
When Edward Hargraves found gold near Bathurst in New South Wales in 1851, it was the first gold to be found in the region. The find quickly triggered the first Australian gold rush. The chance to strike it rich was irresistible for thousands of people who flocked to the goldfields in New South Wales and Victoria from around Australia and overseas. In the 10 years after the first discovery of gold (cause), the population of Australia more than doubled from 405 400 to 1 145 600 (effect).

The discovery of gold and the subsequent gold rushes in New South Wales and Victoria resulted in a range of effects – some short term, others long term. Short-term effects included:

- the arrival of large numbers of **immigrants** from Britain, Germany, Poland, the United States and China
- further **dispossession** of Indigenous people from their land
- discrimination and violence against Chinese miners on the goldfields
- unsanitary conditions in the gold camps leading to outbreaks of dysentery and typhoid
- establishment of businesses such as shops, traders and transporters to support the gold miners.

Long-term effects included:

- huge increases in the amounts of money flowing into the economies of New South Wales and Victoria through taxes and increased spending
- a growth in overseas trade
- improvements in infrastructure including the construction of grand public buildings, roads, train and tram networks, and sewerage systems as well as the creation of schools, churches, libraries and other community amenities.



Source 4 The Australian gold rushes of the mid-1800s brought people and wealth to Australia and led to a period of growth and expansion, as these illustrations of Melbourne in 1860 show.

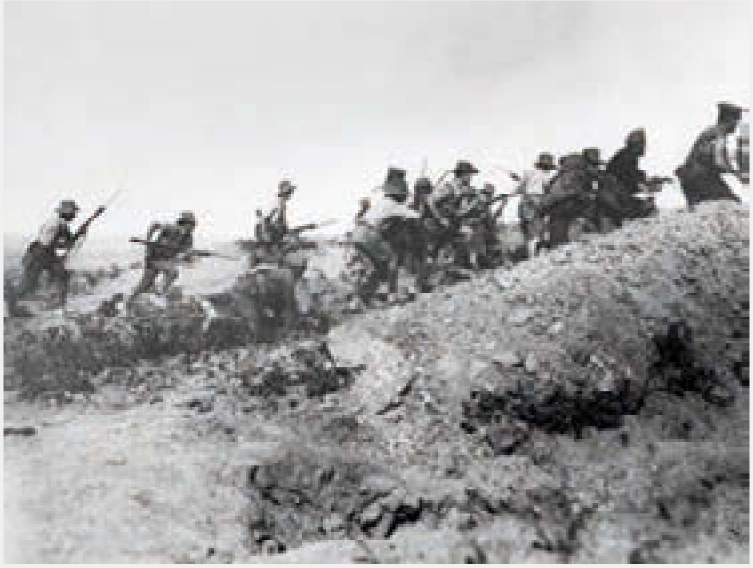
Evidence

Evidence is the information gathered from historical sources. The concept of evidence is an essential part of historical inquiry. Evidence can come from many different sources; for example, interviews and accounts from people who lived at the time, letters, diaries, films, maps, newspapers, buildings, paintings, photographs, song lyrics, nursery rhymes, clothing, photographs and even cartoons. But how do we use these sources to piece together the story of the past? We can make an educated guess (called a **hypothesis**) and then look for evidence to support it.

Evidence can be gathered from two types of sources:

- **primary sources** – objects created or written at the time being investigated, for example, during an event or very soon after. Examples of primary sources include official documents, such as laws and treaties; personal documents, such as diaries and letters; photographs or films; and documentaries. These original, firsthand accounts are analysed by historians to answer questions about the past.
- **secondary sources** – accounts about the past that were created after the time being investigated and which often use or refer to primary sources and present a particular interpretation. Examples of secondary sources include writings of historians, encyclopaedia entries, documentaries, history textbooks, films, illustrations, reconstructions and websites.

Historians do not always agree on evidence, even when it is coming from the same source. They often have different opinions or points of view. This is why historians are constantly searching for new sources of evidence. They need to use a range of different sources to help them gain a more complete picture of the past.



Source 5 This photograph taken in 1915 shows Australian troops charging a Turkish trench during the final days of the Gallipoli campaign. The photograph clearly shows the rocky terrain of the Gallipoli Peninsula and is an example of a primary source. War photography became a part of warfare at all levels for the first time during World War I. As well as documenting military offensives, photographs were used for surveying and mapping territory and for propaganda campaigns. Photographs were not only taken by military photographers, they were also taken by ordinary soldiers in order to document their personal experiences.

Source 6 This still from the 1981 feature film *Gallipoli* starring Mel Gibson shows Australian soldiers in battle during the Gallipoli campaign. The movie recreates the experiences of a number of Australian soldiers who fought as part of the Anzac forces. It is an example of a secondary source.

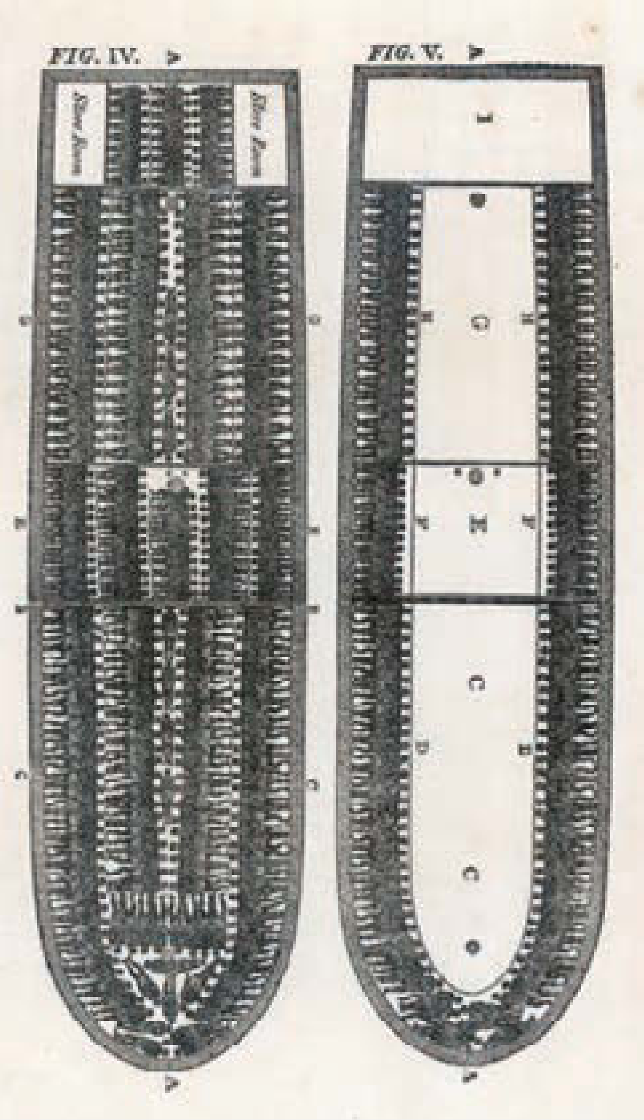
Empathy

The concept of empathy helps us to understand the impact of past events on particular individuals or groups. This includes an appreciation of the circumstances they faced and the motivations, values and attitudes behind their actions. Put another way, empathy is the ability to 'walk in someone else's shoes' – to be aware of and sensitive to their feelings, thoughts and experiences.

Empathising brings history to life. It connects us as human beings regardless of how much time has passed. For example, by the beginning of the 18th century the slave trade was well established in many parts of the world. It is estimated that up to 12 million African people may have been shipped to the Americas as **slaves**. After capture, slaves were packed into ships for transportation to the Americas. Slave ships were extremely crowded and conditions were inhumane (see Source 7). Slaves were kept below decks for most of the long journey in dark and filthy conditions with no ventilation. They were kept chained and were given no medical assistance if they fell ill. From a modern perspective, it is easy to view this treatment of other human beings as barbaric and wrong, and to feel empathy for those slaves who suffered as a result of this treatment. **Slavery** was outlawed in most countries around the world in the 1800s and since this time, the vast majority of people have come to think of slavery as cruel and unacceptable. However, this has not always been the case.

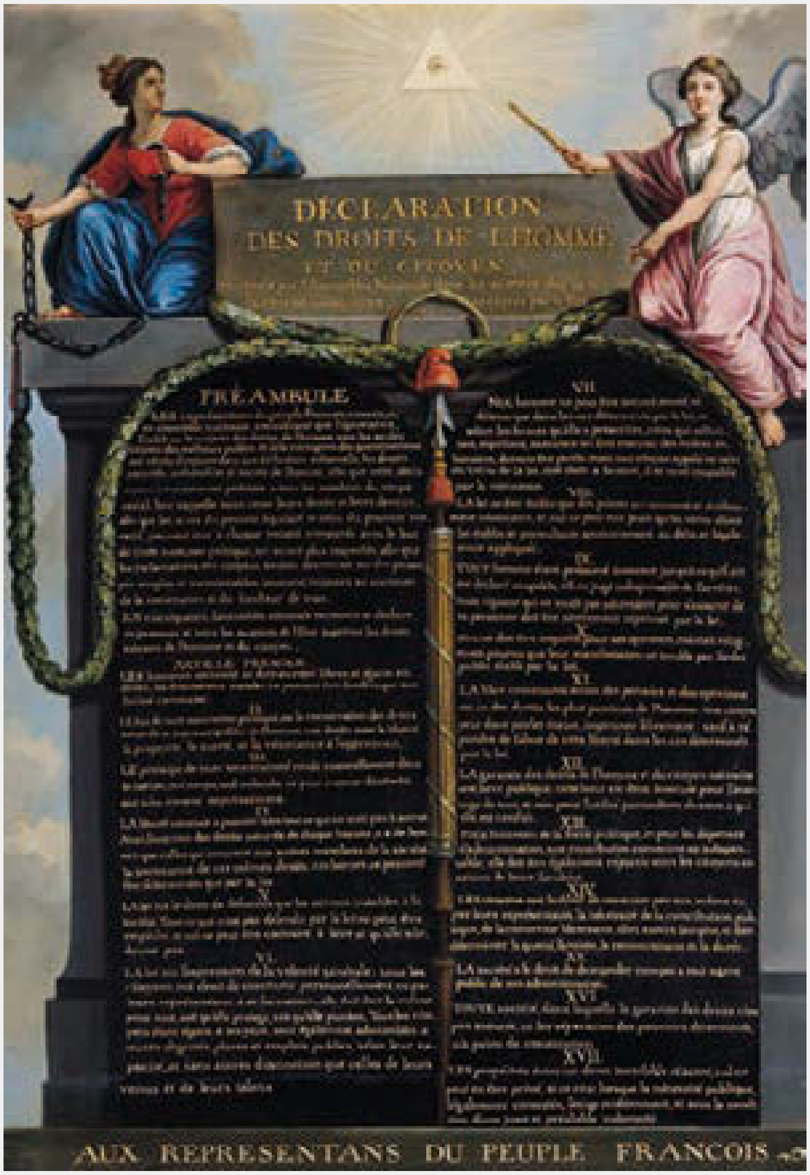
For historians, applying the concept of empathy during a historical inquiry into the slave trade encourages them not to judge events and people by modern standards. It requires an appreciation of the social norms of the period in order to better understand people's motives and actions. Although it may be difficult, a reasoned inquiry means you also need to empathise with slave owners and traders. The slave owners truly believed that they were doing nothing wrong – even George Washington, the first President of the United States, was a slave owner. African slaves were believed to be inferior to white men in intellect, in fact they were considered to be childlike, but to be physically stronger than white men and well suited to the heat. It was considered the 'natural order' for the slaves to be 'looked after' by their owners. Some Christian teachings at the time also supported this view, as did theories such as **social Darwinism**. In addition to these factors, owning slaves was legal. As a result of these factors, slavery was common across the Caribbean and Southern American states, where there were severe labour shortages. Without slaves, the landowners would not have been able to produce their crops of cotton and sugar that were in demand in Europe.

Although empathy does not excuse the actions of people in the past, it does allow us to understand them better.



Source 7 A plan of the British slave ship *Brookes* in 1789. This shows it carrying 454 slaves, 'tightly packed', after the Slave Trade Regulation Act of 1788, which was introduced to improve conditions on slave ships. Before the Act, the *Brookes* carried between 609 and 740 slaves.

Significance



Source 8 The Declaration of the Rights of Man and of the Citizen, 1789

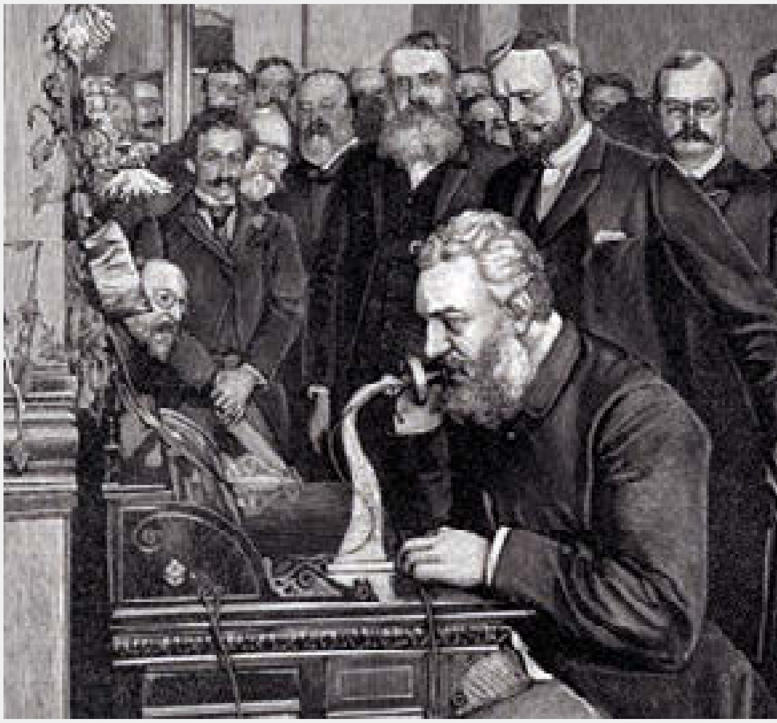
The concept of significance relates to the importance assigned to aspects of the past. This includes people, events, developments, discoveries, movements and historical sites. History is full of so many important events, significant people and interesting places that we could never study all of them. Instead, we need to make a judgment about which of these is worthy of study. In order to determine if a person, event, development, discovery, movement or site is historically significant, historians may ask the following questions:

- How important was it to people who lived at that time?
- How many people were affected by it?
- To what degree were people's lives affected by it?
- How widespread and long-lasting were its effects?
- Can its effects still be felt today?

For example, the **French Revolution** has been said to have laid the groundwork for the birth of the modern world across Europe. Why would a revolution affecting a single country be considered so significant? The French Revolution took place in 1789, starting with the demand for a government under the king that was more representative of the people. It ended with the king being executed, along with many members of the **aristocracy**. The political and social ideals of the French Revolution went on to inspire many other developments around the world. Some legacies of the French Revolution that are still significant today include:

- the introduction of a representative government in France guided by the understanding that rulers could only govern with the consent of the people
- the introduction of the **separation of powers** between three arms of government – executive, legislative and judicial branches
- the creation of the Declaration of the Rights of Man and of the Citizen (see Source 8); a fundamental document in the history of human rights around the world based on the idea that all citizens should have equal rights and opportunities in **society**
- the realisation that royal power and the 'right to rule' in many countries across Europe could no longer be taken for granted
- the democratisation of rule in different countries across Europe and the establishment of many representative **democracies** around the world.

Contestability

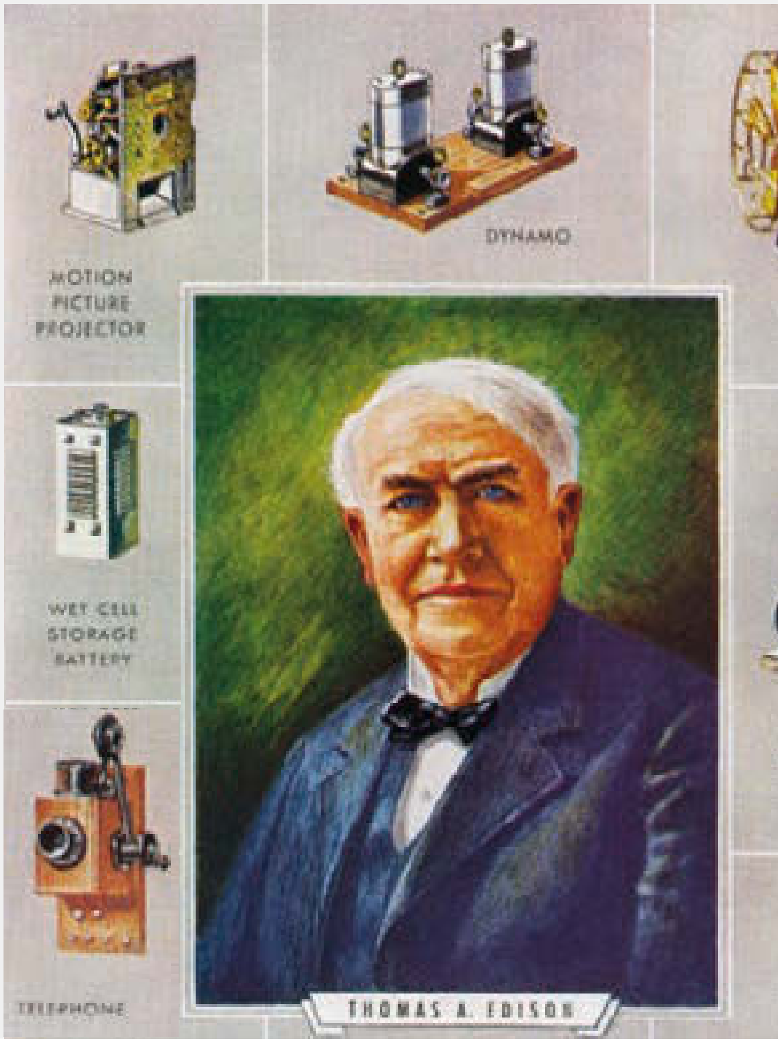


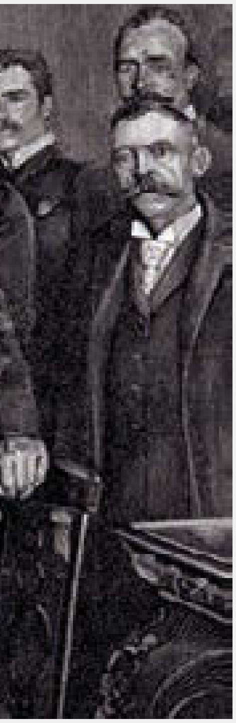
The concept of contestability relates to explanations or interpretations of past events that are open to debate. Historians around the world often have access to very different sources. Artefacts, such as jewellery and weapons, may have been damaged, or artworks may be incomplete. Written records may contain errors, or might have been changed after they were written. Some records may even have been completely destroyed. This can lead historians to draw different conclusions about what they are seeing. Even historians studying the same sources can sometimes come to very different conclusions about what the evidence is telling them. This is one of the exciting things about history – it is open to debate. There is often no right answer, and historians are always seeking a more complete understanding of the past.

The Industrial Revolution was a time of great change. In a short amount of time, new inventions and innovations brought about huge changes to the way people worked, lived, communicated and travelled. For example, the invention of the telephone revolutionised the way in which people communicated all around the world. Scottish-born inventor Alexander Graham Bell has long been credited with inventing the telephone. Certainly, he was the first to patent it in the USA, in 1886, after conceptualising and developing a version of the telephone (see Source 9). However, many historians contest this belief.

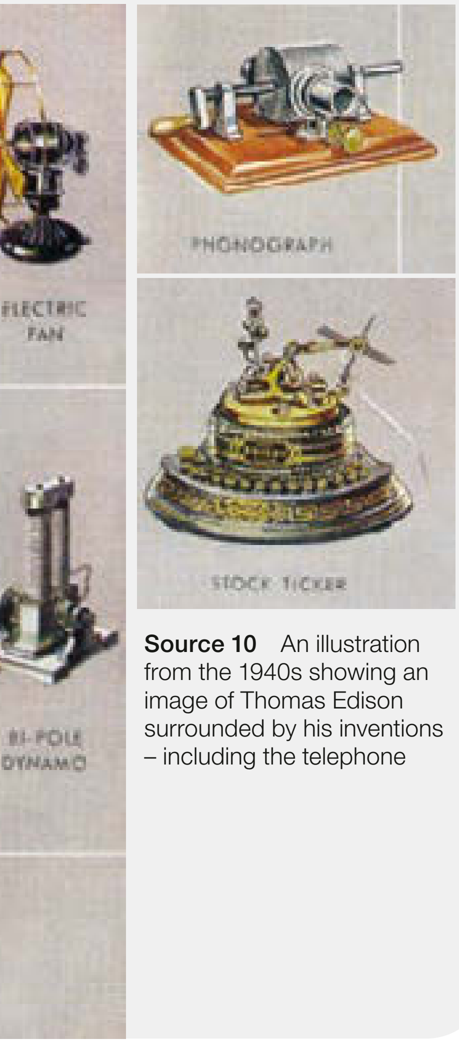
Other inventors were also working on similar inventions at the same time as Alexander Graham Bell. Among them were Antonio Meucci, Innocenzo Manzetti and Thomas Edison (see Source 10). Many historians credit these inventors with the development of the first voice communication apparatuses. Unfortunately, it is difficult to prove who was first because many of the electronic components that would eventually become part the telephone were being developed separately around the world by many different people at the same time.

For this reason, the inventor of the telephone will always be contested by historians. One thing that cannot be contested is the fact that no single person was solely responsible for the invention.





Source 9 An artist's impression of Alexander Graham Bell making the first telephone call between New York and Chicago, 18 October 1892



Source 10 An illustration from the 1940s showing an image of Thomas Edison surrounded by his inventions – including the telephone

Check your learning 6.1

Remember and understand

1 What is the difference between a primary and secondary source? Give an example of each type of source.

2 The red-and-white logo of Coca-Cola (and its distinctive font) has been around since 1885. Which historical concept is this an example of?

3 Which historical concept would be most helpful to historians attempting to understand the factors that allowed the slave trade to continue for so long?

4 The Industrial Revolution was a time of great invention. Why is it sometimes difficult to credit only one person with a particular invention? When historians disagree about particular events and facts, which historical concept is this an example of?

Apply and analyse

5 Look again at the types of questions historians ask to decide if events, discoveries, people or sites are historically significant. For example:

- How important was it to people who lived at that time?
- How many people were affected by it?
- To what degree were people's lives affected by it?
- How widespread and long-lasting were its effects?
- Can its effects still be felt today?

  a Use each of these questions to determine the historical significance of the following:
    i the French Revolution
    ii the discovery of gold in Australia
    iii the making of the film *Gallipoli*
    iv the introduction of a new formulation of Coca-Cola in 1985 (marketed as 'new Coke').

  b Discuss your responses as a class. Did you all draw the same conclusions?

6 Examine Source 1 showing the extent of the British Empire at the start of the 20th century.

  a What motivated countries such as Britain to form empires? What perspective did the British adopt towards the people and places they colonised?

  b Why is the historical concept of perspectives useful when conducting a historical inquiry into imperialism?

Evaluate and create

7 Directors and production staff on historical feature films like *Gallipoli* invest a lot of time and money to achieve a high level of historical accuracy in the settings and costumes they use. Despite this, many of these films also tend to reflect a modern view of the event and the people involved. Think of a historical film you have seen and assess its usefulness as a historical source.

8 Create a flow chart to show the causes and effects (both short term and long term) of the gold rushes on Australian society.

9 Using a selection of new images and examples, create a poster or audiovisual display that briefly explains all seven of the historical concepts discussed in this section.

6.2 Historical skills

Historians examine the past and try to explain what they find. Like detectives at the scene of a crime, they follow a process of historical inquiry – they pose questions, locate and analyse sources, use evidence from these sources to develop an informed explanation about the past, and communicate their findings.

To conduct a historical inquiry, historians need a range of skills. By studying history you will gradually master these skills. Some you will find easy to master, while others may take longer. As you develop each new skill you will gain another important tool for understanding and explaining events and people that have shaped our world.

You will already be familiar with many of these skills from your studies in junior history. This year you will revisit each of the skills and learn to apply them more effectively. The skills you will be learning are organised into four broad categories (see Source 1).

Each category represents the stages of a historical inquiry and contains a number of more specific skills that you will be practising.

It might help you to think of each of these skills as individual tools in your toolkit. For some historical inquiries, you may only need to use one tool; for others, you may need to use all of them.

Source 1 The four stages of every historical inquiry and the skills commonly used at each stage

Questioning and research	• Identify current personal knowledge, gaps, misconceptions, currency of information, personal perspective and possible perspectives of others • Construct, select and evaluate a range of questions and hypotheses involving cause and effect, patterns and trends, and different perspectives • Analyse and clarify the purpose of an inquiry using appropriate methodologies, ethical protocols and concepts to plan for, and inform, an investigation • Use a range of methods to collect, select, record and organise relevant and reliable information and/or data from multiple sources that reflect the type of analysis that is needed (e.g. questionnaires, surveys, emails, tables, field sketches, **annotated** diagrams), with and without the use of digital and spatial technologies • Identify the origin, purpose and context of primary sources and/or secondary sources • Use appropriate ethical protocols, including specific formats for acknowledging other people's information and understand that these formats vary between organisations
Analysing	• Use criteria to analyse the **reliability**, bias, usefulness and currency of primary sources and/or secondary sources • Analyse information and/or data in different formats (e.g. to explain cause and effect relationships, comparisons, categories and subcategories, change over time) • Account for different interpretations and points of view/perspectives in information and/or data (e.g. from tables, statistics, graphs, models, cartoons, maps, timelines, newspapers) • Analyse the 'big picture' (e.g. put information and/or data into different contexts, reconstruct information by identifying new relationships, identify missing viewpoints or gaps in knowledge) • Apply subject-specific skills and concepts in familiar, new and hypothetical situations
Evaluating	• Draw evidence-based conclusions by evaluating information and/or data, taking into account ambiguities and multiple perspectives; to negotiate and resolve contentious issues; to propose individual and collective action in response to contemporary events, challenges, developments, issues, problems and/or phenomena • Critically evaluate information and/or data and ideas from a range of sources to make generalisations and inferences; propose explanations for patterns, trends, relationships and anomalies; predict outcomes
Communicating and reflecting	• Select a range of appropriate formats based on their effectiveness to suit audience and purpose, using relevant digital technologies as appropriate • Develop texts, particularly explanations and discussions, using evidence from a range of sources to support conclusions and/or arguments • Deconstruct and reconstruct the collected information and/or data into a form that identifies the relationship between the information and the hypothesis, using subject-specific conventions, terminology and concepts • Compare evidence to substantiate judgements (e.g. use information and/or data from different places or times; use tables, graphs, models, theories) • Generate a range of viable options in response to an issue or event to recommend and justify a course of action, and predict the potential consequences of the proposed action • Reflect on why all findings are tentative (e.g. the changing nature of knowledge, changes in circumstances or values)

6.3 Questioning and researching

Generating and selecting different kinds of questions to inform a historical inquiry

Historians begin any historical inquiry by asking big questions. From these big questions, historians develop a hypothesis (theory) about who, what, where and why certain events took place.

These questions then help to frame the process of inquiry and act as a guide for the collection of evidence. The photograph in Source 1 shows a group of Australian troops stationed in Egypt at the start of World War I.

skill**drill**

Asking questions to guide a historical inquiry

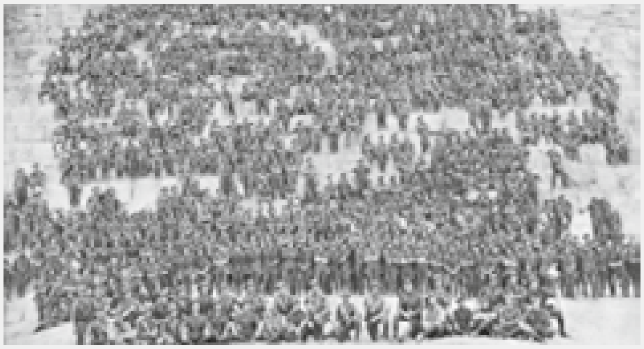
Historical sources often form the basis for historical inquiries. In order to plan out the scope of an inquiry – and work out what research needs to be done – historians often begin by asking a series of questions. For example, a historian looking at Source 1 might ask:

- Who are the people in this photograph?
- Where are they?
- When was the photograph taken?

While these questions provide an interesting starting point for planning and research, not all questions are created equal. Some are better than others. By asking the questions above (known as closed questions), you will often discover a range of facts to follow up on. Closed questions usually have a right or wrong answer (or can sometimes be answered yes or no). This is a good start, but sometimes isn't enough.

In addition to asking closed questions, it is important that you ask more complex questions (known as open-ended questions). Open-ended questions don't have simple answers that can be seen as right or wrong. These questions involve more complex issues and can help frame your inquiry in more depth. For example, open-ended questions about Source 1 might include:

- Why did the Australian soldiers in the photograph enlist to fight in World War I?
- What types of experiences did these Australian soldiers have fighting overseas in Egypt?
- How were Australian soldiers treated by Egyptians?
- How did Australian soldiers treat Egyptians?



Source 1 This photograph taken on 10 January 1915 shows the original Australian officers and men of the 11th Battalion, 3rd Brigade in the Australian Imperial Forces (AIF). The group of over 685 soldiers are spread over the side of the Great Pyramid of Giza in Egypt.

The best historical inquiries are guided by a combination of closed and open-ended questions, so knowing the difference is key!

Apply the skill

1. Look at Source 1 carefully. Generate two closed questions and two open-ended questions of your own that will help guide a historical inquiry into Australia's involvement in World War I.
2. Once you have generated your inquiry questions, think about the kind of information you will need to collect in order to answer them. Work out where you might be able to locate this information.
3. Are there any questions for which you have not been able to find reliable evidence or information? What reasons might there be for this?

Identifying and locating relevant sources, using ICT and other methods

Sources provide information for historians. They can take many different forms, from historical artefacts to written records in books or online. Some examples of sources include human remains, coins, cave paintings, textbooks, journals, online databases, newspapers, letters, cartoons and diaries.

Locating a range of relevant sources is a valuable skill that usually involves a number of different search methods, such as:

- checking catalogues at your school and local library
- using online search engines such as Google, Yahoo! and Bing
- visiting museum and government websites
- looking at newspaper and magazine archives
- contacting local historical societies
- interviewing older family members about the past, and examining family antiques and keepsakes.

Using ICT to locate relevant sources

Although printed books and newspapers are valuable sources of information, most research today is conducted online. In order to ensure that sources gathered online are accurate, reliable and relevant, a number of guidelines should be followed:

- Search engines such as Google are useful research tools, but much of the material on these sites is not reliable and may contain inaccuracies, false and misleading information or material that is out of date. When using search engines like Google or Yahoo!, be sure to define your search using keywords. Your librarian is a good person to ask for help and information. Most schools will also have a website devoted to providing information about developing good research skills.
- A reliable way of searching for sources is to use sites linked to educational institutions, government departments, reputable companies, museums and universities. A quick way of telling if a site is reputable is to look at the domain name in the URL (Internet address). Some of the most common domain names are listed in Source 2 along with some information about their reliability.

Domain name	Description
.edu	The site is linked to an educational institution such as a university or school. These sites are generally very reliable.
.gov	The site is linked to a government institution. These sites are generally very reliable.
.net	This site is linked to a commercial organisation or network provider. Anyone is able to purchase this domain name and generally there is no one to regulate the information posted on the site. As a result, these sites may be unreliable.
.org	This site is linked to an organisation. Generally, these organisations are not for profit (e.g. Greenpeace, World Vision International, British Museum). If the organisation is reputable and can be contacted, it generally means that the information provided has been checked and verified by that organisation. You need to be aware of any special interests that the organisation may represent (e.g. particular religious, commercial or political interests) as this may influence what they have to say on a particular issue. If you are unsure about the reliability of information found on a website with this domain name, check with your teacher or librarian.
.com	This site is linked to a commercially based operation and is likely to be promoting certain products or services. These domain names can be purchased by anyone, so the content should be carefully checked and verified using another, more reliable source.

Source 2 Some common domain names and their characteristics

.org
.gov
.com
.edu
.info
.biz
.net
.at

Source 3 There are many different types of Internet domain names, but not all can be trusted to provide relevant and reliable information.

- Avoid blogs posted by unknown individuals. If you happen to find information relevant to your investigation on a blog or social media site, always verify it by using a more reliable source.
- Never cut and paste information from the Internet straight into your own work. Taking someone else's work, ideas or words and using them as if they were your own is called plagiarism and can result in very serious consequences.

Recording relevant sources

As you identify and locate relevant sources, it is essential that you record details to include in your list of references or bibliography.

When citing (mentioning) a book in a bibliography, include the following, in this order, if available:

1. author surname(s) and initial(s)
2. year of publication
3. title of book (in italics)
4. edition (if relevant)
5. publisher
6. place of publication
7. page number(s).

EXAMPLE:

Easton, M., Carrodus, G., Delany, T., Howitt, B., Smith, R., 2016, *Oxford Big Ideas Humanities and Social Sciences 9 Western Australian Curriculum,* Oxford University Press, Melbourne, pp. 18–19.

When citing an online source in a bibliography, include the following information, if available:

1. author surname(s) and initial(s) or organisation name
2. year of publication or date of web page (last update)
3. title of document (article) enclosed in quotation marks
4. date of posting
5. organisation name (if different from above)
6. date you accessed the site
7. URL or web address enclosed in angle brackets <…> .

EXAMPLES:

1 'Life during World War I, 1918', 2009, EyeWitness to History, accessed 24 March 2016, <http://www.eyewitnesstohistory.com/WWI.htm>.

2 Ferguson, L. State Library of Victoria, 2016, 'Australia and WWI', accessed 4 July 2016, < http://ergo.slv.vic.gov.au/explore-history/australia-wwi>.

Source 4 A lot of historical research today is carried out online.

Identifying the origin, purpose and context of primary and secondary sources

As explained earlier, historians use two types of sources to gather evidence about the past:

- primary sources – objects created or written at the time being investigated; for example, during an event or very soon after
- secondary sources – accounts about the past that were created after the time being investigated and which often use or refer to primary sources and present a particular interpretation.

Both primary and secondary sources are useful, but it is important to understand:

- where they came from (origin)
- why they were created (purpose)
- the historical setting in which they were created (context).

These factors are important because they provide clues about the perspective of the person who made the source, as well as the attitudes and beliefs that were common at that time. All sources are influenced by the author's own point of view. In some cases the author may even have been paid (or forced) to write in a particular way or to ignore certain facts. This is referred to as **bias** and is often aimed at persuading the reader to agree with the author's point of view. This is why historians must carefully analyse and evaluate all of the sources they use.

Asking 'who', 'what', 'when' and 'why' questions will help you identify the origin and purpose of the sources. For example:

- Who wrote, produced or made the source?
  - Is the creator's personal perspective obvious in the source?
  - Is the creator a member of a particular group, religion or organisation?
- What type of source is it?
  - Was the source created at the time of the event or afterwards?
- When was the source written, produced or made?
  - How old is the source?
  - Is it an eyewitness account or is it written by someone at a later date?
  - Is the source complete?
- Why was it written or produced?
  - Was it designed to entertain, persuade or argue a point of view?
  - Does the creator have anything to gain personally from the source?
  - What other events may have been happening at the time and might have influenced the author or source?

Using information from a range of sources as evidence

By this stage of your historical inquiry, you will have located and collected a variety of different sources and types of information. Now it is time to process and synthesise the most relevant information, which you will use as evidence to support your hypothesis. There are a number of different ways to organise large amounts of information so that you can decide quickly and easily which sources provide the most useful, relevant and reliable evidence.

Source 1 The origin and purpose of these sources is different even though they are both related to World War I.

Source A is a primary source – a photograph of the camp and supplies taken on 25 April 1915 shortly after the landing of troops at Anzac Cove.

Source B is a secondary source – a still from the movie *Gallipoli* starring Mel Gibson filmed in 1981 showing Australian soldiers in battle during the Gallipoli campaign.

Using graphic organisers to help you process and synthesise information

Graphic organisers are very useful tools for collecting, comparing and selecting suitable resources that you have located. A decision-making chart like Source 2 can help you do this.

Source 2 A decision-making chart showing an example of how you might process, compare and select sources

RESEARCH TOPIC: 'What was the significance of the Gallipoli campaign?'

HYPOTHESIS: That the Gallipoli campaign played a significant role in the formation of the Australian identity, both at the time and to this day.

Source number:	Type of source:	Pros and cons:	Reference:
Source 1 WWI Gallipoli – Australian Army website	Secondary source (but includes many primary sources too)	Pros: - good selection of primary sources like photos - includes lots of interviews - information is factually correct and detailed Cons: - information is a bit one sided, only Australian opinions included, no others	http://www.army.gov.au/our-history/history-in-focus/WWI-gallipoli
Source 2		Pros: Cons	
Source 3		Pros: Cons	
Source 4		Pros: Cons	

Recommended sources in order of relevance and usefulness:

1
2
3
4

Check your learning 6.3

Remember and understand

1 List three different examples of sources. Next to each example, write where it can be found.

Apply and analyse

2 Use the table below and list two advantages and two disadvantages of using the different search methods shown.

Search methods	Advantages	Disadvantages
Using a library catalogue	• •	• •
Conducting an Internet search	• •	• •
Interviewing an older family member	• •	• •

3 Examine the following sites. Decide whether you think they are reliable. Explain why.
- **a** Australian National Museum, www.nma.gov.au
- **b** The Coca-Cola Company, www.coca-cola.com.au
- **c** Oxford University Press, www.oup.com.au
- **d** Wikipedia, https://en.wikipedia.org/wiki/World_War_I

Evaluate and create

4 Create a handbook or class wiki providing tips on good research techniques. Share it with other students in your year level or post it on your school intranet.

6.4 Analysing

Identifying and analysing the perspectives of people from the past

Primary and secondary sources reflect many different perspectives, interpretations and values from the past. These may include personal, social, political, economic or religious points of view. For example, an extract from the diary of Ellis Silas presents a very personal account of his experiences during the Gallipoli campaign in 1915. This account is one of many that can help you to gain a more thorough understanding of the experiences of soldiers during the Gallipoli campaign.

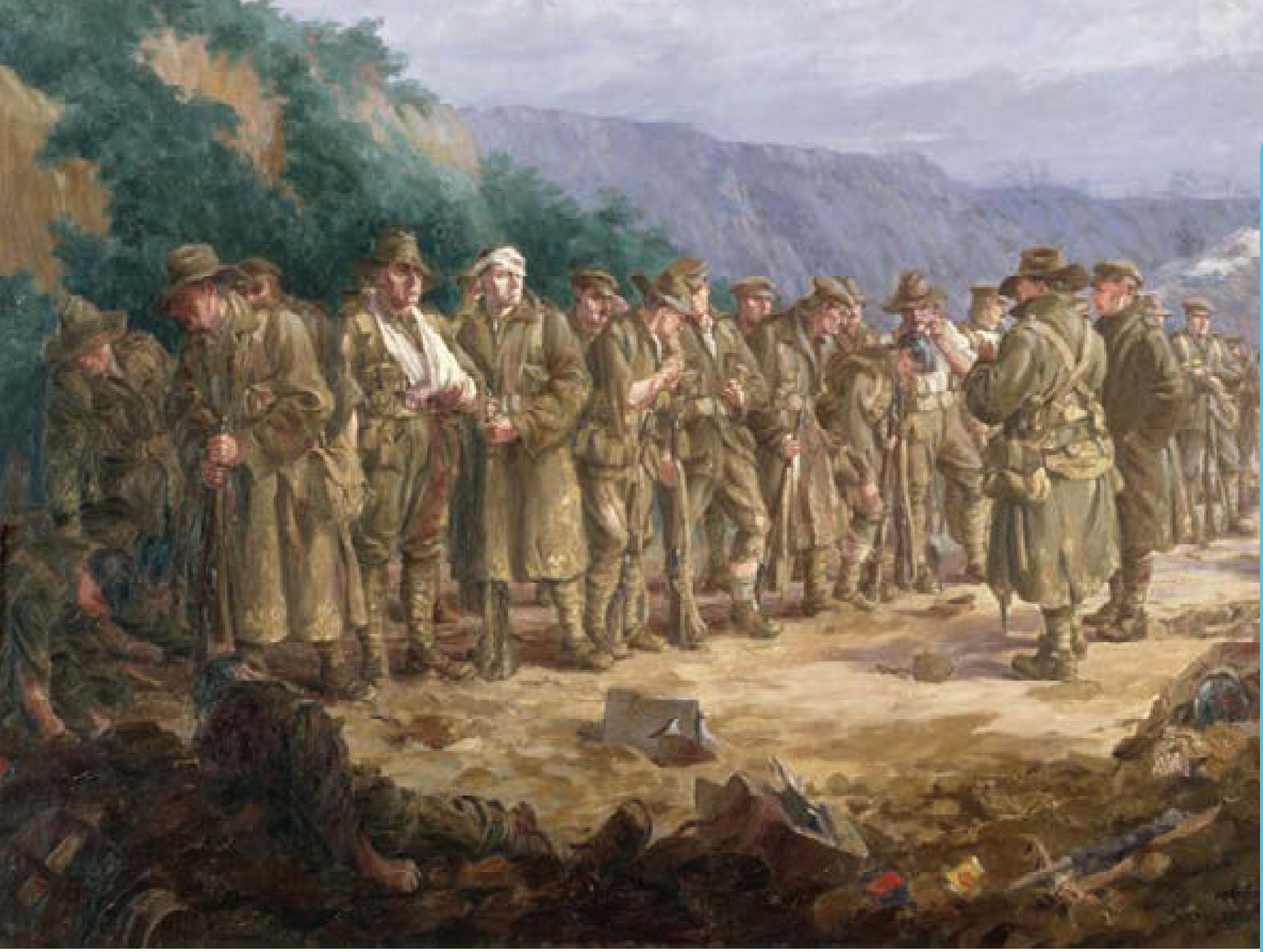
> 'We are relieved from the firing line – the battle still raging; every nerve strained. Australians have done splendidly, holding a very difficult position; have been much troubled with snipers. Am glad I have done my duty. First wash for a week – go down to the Water Hole, which is always covered by Turkish snipers – it was safer in the trenches than here – all around this spot are dead and wounded who have been hit when dodging round this corner; however, one must drink, even if the price be Death. Make dug-outs in our rest camps, but men are continually caught by the snipers. Many are commencing to suffer from dysentery, though the spirit of the men is splendid, always ready for a joke.'

Source 1 Extract from the diary of Ellis Silas, an artist and soldier fighting with the Anzacs at Gallipoli. It is taken from 'The Diary of an Anzac', ML MSS.1840, Mitchell Library, State Library of New South Wales

Source 2 Detail from a studio portrait of of Ellis Silas, London, 1919 [AWM P02801.001]

Many other sources provide evidence on different aspects the war and the Gallipoli campaign; from the perspectives of Australian and New Zealand troops, English troops and Turkish troops.

It is only when we consider a range of different perspectives revealed through all of the available sources that we can begin to form a realistic picture of what World War I was like for all involved and make judgments about the significance of these events.



Source 3 *Roll Call*, Ellis Silas, 1920, oil on canvas, 101.8 x 153.1 cm [AWM ART02436]

Check your learning 6.4

Remember and understand

1 Historical sources always reflect the perspective of their writer. Give two examples of factors that may influence a writer's point of view or perspective.

Apply and analyse

2 List three key pieces of information about the conditions at Gallipoli during World War I as presented in Source 1, 'The Diary of an Anzac'. How might an account written from the perspective of a Turkish soldier differ?

3 Source 1 is a primary written source taken from 'The Diary of an Anzac' by Ellis Silas. It was written in 1915 by an English soldier and artist at Gallipoli.
   - a Do you think this piece of writing presents a balanced and reliable description of conditions at Gallipoli? Why/why not?
   - b Source 3 is a painting by Ellis Silas produced in 1920 that was commissioned and paid for by the Australian War Records Section. Do you think it shows a different perspective from Source 1 (diary)? Why/why not?

6.5 Evaluating

Evaluating the reliability and usefulness of sources

A useful source, whether primary or secondary, is one that will add to your understanding of a historical inquiry. The source needs to be relevant to your investigation and must also be reliable. The conclusions you draw about the sources you have found will determine their usefulness. In many cases, this means separating fact from opinion.

- A fact is something that can be proved beyond doubt and across multiple sources (e.g. the Anzacs landed at Gallipoli on 25 April 1915).
- An opinion is something based on what a person (or persons) believes to be true but cannot necessarily be proven (e.g. Gallipoli is Australia's most important military campaign of all time).

A simple way to detect whether a statement is fact or opinion is to look closely at the language used. The use of words such as 'might', 'could', 'believe', 'think' and 'suggests' all indicate that an opinion is being expressed.

The following questions will help you determine the reliability and usefulness of a source:

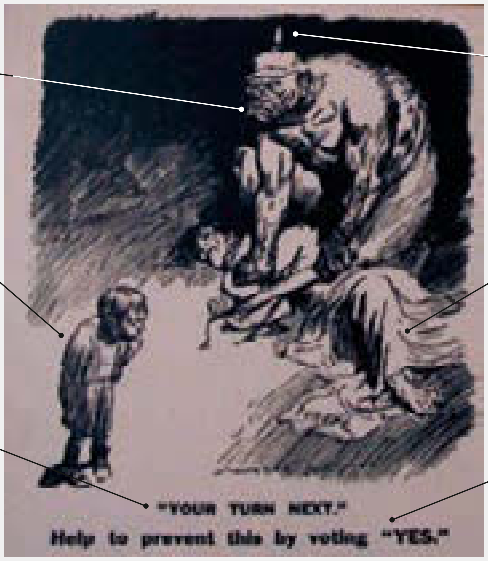
- Does it provide factual information or opinion?
- Does it provide information that is supported and reinforced by evidence from other sources?
- Does it provide enough information and sufficient detail to help me answer the inquiry question?
- Is it balanced or does it present one point of view (in other words, is it biased)?

skill**drill:** Historical sources as evidence

Analysing political cartoons

Political cartoons appear in newspapers, magazines and online. They are as popular today as they were in the past because they use humour and satire to pass comment on a range of topical political and social issues. They tend to present caricatures of important political figures from the time, exaggerating their physical features for effect.

Political cartoons taken from a particular period of history can be excellent primary sources because they provide a rich combination of fact and opinion from the time. However, they often tend to present a particular point of view on an issue and are not always balanced in their approach. For this reason, it is important that you are able identify examples of bias and separate fact from fiction when using them in your research.


"YOUR TURN NEXT."
Help to prevent this by voting "YES."

The expression on the monster's face is mincing and scary.

Australia is shown as an unsure helpless boy watching on while Europe is murdered by Germany.

The text suggests that if Australia does not help Europe, Germany will invade next and the same thing will happen here.

The shape and design of the helmet suggests that this monster is a German soldier.

Europe is shown as a poor, defenseless woman being terrorised by a strong and evil monster. This is designed to make Australians angry and want to help her.

The cartoon is designed to make people vote 'YES' in the conscription referendum, so this text directs their anger towards doing this.

Source 3 An example showing how a political cartoon can be analysed

When analysing political cartoons, follow these steps:

Step 1 Begin by identifying the following things:

- the title of the cartoon (if available)
- date the cartoon was first published
- the name of the publication it appeared in and (if possible) the types of readers it was aimed at.
- the name of the artist (if available).

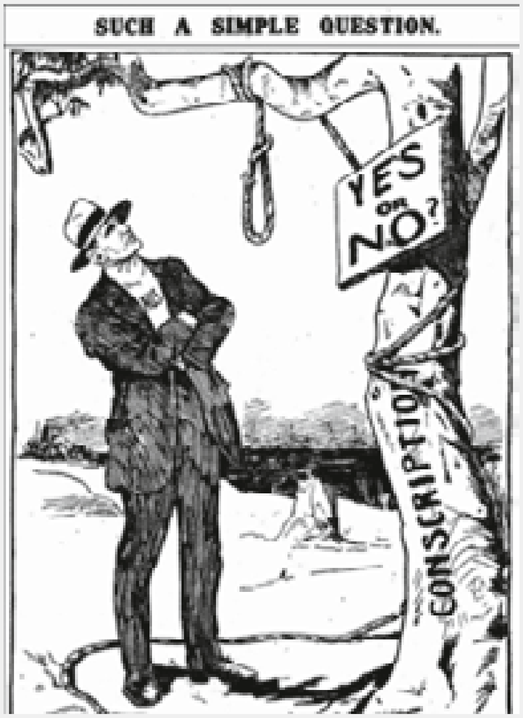
Step 2 Identify the political event or issue being shown in the cartoon. Look for visual clues to help you work this out. Keep in mind that there may be certain aspects of political cartoons that you do not fully understand. You may not be familiar with all of these issues presented (or they may not be clearly explained in the cartoon). Don't let this stop you from analysing those aspects of the cartoon that you are familiar with. You can also search for key words on the Internet to help you understand things that are unclear.

Step 3 Once you have identified the political issue, try to identify the person (or people) and situation shown in the cartoon. Look at what they are doing and wearing. Analyse how they are behaving or interacting with other people shown. Are they wearing unusual clothing, posing in a certain way or shown with particular facial expressions?

Step 4 Examine any other visual clues or devices that the cartoon uses to convey its message. What symbols does it use? Are these important and do they evoke a personal or emotional response for the reader? How are the characters represented?

Apply the skill

1 Follow the steps outlined to analyse Source 4.


SUCH A SIMPLE QUESTION.
YES or NO?
CONSCRIPTION

Source 4 'Such a simple question' World War I anti-conscription cartoon, *Australian Worker*, 1917

Check your learning 6.5

Remember and understand

1 Which of the following is an example of a primary source?
  a letter written by an Australian soldier during the Gallipoli campaign to his wife in Australia
  b photograph of Australians visiting Anzac Cove to commemorate soldiers who died during the Gallipoli campaign of World War I.

2 Provide two reasons why graphic organisers are useful tools when processing and synthesising information from a range of different sources.

Apply and analyse

3 Give two reasons why it is important to know the origin and purpose of every source used in a historical inquiry.

4 What words help indicate that a writer is expressing an opinion rather than a fact?

Evaluate and create

5 Conduct an online search to locate other graphic organisers that may be useful to help you process and synthesise information from a range of historical sources.

Some graphic organisers of use to you may include KWL charts, fishbone diagrams and PMI charts. Once you have examined other types of graphic organisers, make a decision about which ones you think are most useful to you.

6.6 Communicating

Using chronology to show the relationship between events

One of the most helpful things historians can do to get a better understanding of the past is to organise events in the order they took place. This is known as **chronology**. Chronology can help us organise things that happened over a short period of time (like a day or week) or a long period of time (like thousands of years). We can also use chronology to look at events that happened in one place or one society, or compare events across many different places and societies.

Chronology allows us to develop an ordered sense of time. Once events have been ordered chronologically, we are able to use a range of historical concepts such as cause and effect, significance, and continuity and change to analyse them in detail. The best way to order events chronologically is to create a **timeline**.

Using historical terms and concepts

Just like scientists and mathematicians, historians share a common language. They use historical terms and concepts to clarify what they are talking about and share their findings. Source 1 lists and defines some important historical terms you will come across during your study of the making of the modern world.

Source 1 Some useful historical terms you will learn while looking at the making of the modern world

Term	Definition
assimilation	the process by which a minority group adopts the language and customs of a dominant population; in the mid-1900s assimilation of Indigenous Australians into white society became official government policy
capitalism	an economic system under which the means of production (e.g. factories, farms and machinery) are privately owned by individuals or corporations and run to generate profits; as opposed to state-owned and controlled systems such as socialism and communism
census	a 'head count' or audit of the number of people living in a particular place at a particular time; information collected during a census can include age, occupation, income, religious beliefs etc.
emigration	to leave one country or region to settle in another
empire	a group of countries and/or areas, often with different languages and having different cultures, ruled by a central power or leader (known as an emperor)
federation	the process by which separate colonies or states form a unified nation with a central government; the Commonwealth of Australia was established in 1901 after the six colonies were joined
immigration	the act of entering and settling permanently in a country or region to which a person is not native
imperialism	the process of gaining and maintaining control over other countries, regions or territories for economic or strategic (military) reasons
industrialisation	a process in which a society or country transforms from an economy based mainly on agriculture and farming into one based on manufacturing and industry
propaganda	information or material that attempts to influence the behaviour or opinions of people within a society; propaganda can take many forms (e.g. posters, flyers, advertising campaigns, films) and is designed to promote a particular cause or course of action and/or damage the cause of an enemy
reparations	money paid by one country to another as compensation for damage, injuries and deaths it has caused during war
socialism	an economic system under which the means of production (e.g. factories, farms and machinery) are publicly owned and resources are allocated to the people according to need; as opposed to privately owned and controlled systems such as capitalism
urbanisation	a term used to describe the increase in the numbers of people living in urban areas (i.e. cities) versus rural areas (i.e. farms)

skill**drill**

Creating a timeline

Timelines are used by historians to sequence time and order important events chronologically. They help divide large sections of time into smaller periods so that events (like the births and deaths of important people, wars and discoveries) can be arranged in the correct order. Timelines can look quite different, but essentially they all work in the same way. There are some basic steps you need to follow when constructing timelines. You should already be very familiar with creating timelines, but Source 2 provides a simple example and some basic reminders. Follow these basic steps when creating a timeline:

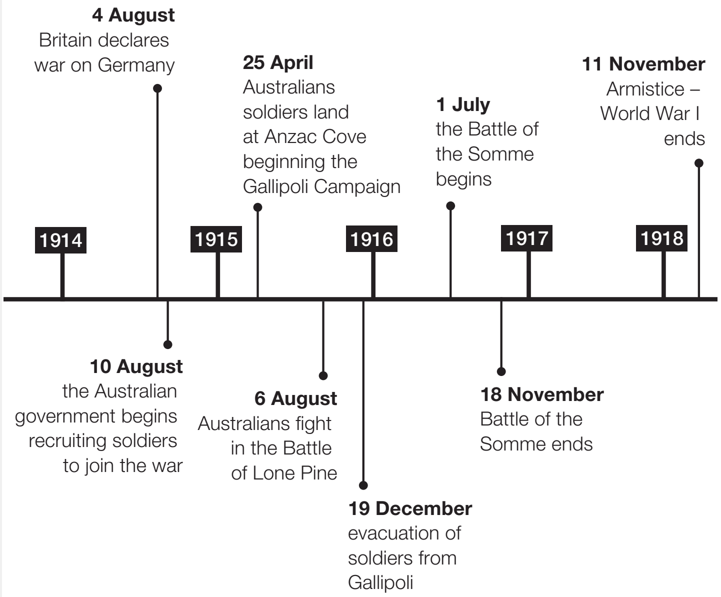
Step 1 Work out the length of time you want to represent on your timeline, then divide it evenly into suitable blocks of time – in this case, 50 years. A timeline showing what you did yesterday might be divided into hours; one showing key events in the 19th century might be divided into decades.

Step 2 To represent a huge span of time, you may need to break your timeline into sections using a jagged line. This break shows that a section of time has been left out and will ensure that your timeline will fit on the page! Just make sure no important events fall in the time you are leaving out.

Step 3 Mark specific dates onto the timeline. These dates need to be accurately plotted so that they appear in chronological order (from left to right). If an exact date is not known, the abbreviation *c.* (from the Latin word ***circa***, meaning 'around') is placed in front of it (e.g. *c.* 1700).

Step 4 Plot important dates and events a brief description of events and the dates plotted on the timeline, describing the events that took place. Include pictures and captions if appropriate.

An Australian Army slouch hat with a stack of traditional Anzac biscuits


4 August
Britain declares war on Germany
25 April
Australians soldiers land at Anzac Cove beginning the Gallipoli Campaign
1 July
the Battle of the Somme begins
11 November
Armistice – World War I ends
1914
1915
1916
1917
1918
10 August
the Australian government begins recruiting soldiers to join the war
6 August
Australians fight in the Battle of Lone Pine
18 November
Battle of the Somme ends
19 December
evacuation of soldiers from Gallipoli

Source 2 A sample timeline showing Australia's involvement in some key events of World War I

Apply the skill

1 Create your own timeline based around one of the following topics:

- development of weapons and technology during World War I
- key battles of World War I
- America's involvement in World War I
- The role of women during World War I.

Your timeline should have at least eight entries and feature at least two images (with captions). You will need to conduct some research online to complete this task.

Developing texts, particularly descriptions and explanations

Historical writing requires you to describe and explain events using evidence from a range of sources. You will often be required to outline the significance of a past event while providing reasons for the event and referring to relevant evidence. Different types of sources need to be used to ensure that historical writing presents a balanced view and is supported by reliable evidence. The two most common and useful text types you will use this year are descriptions and explanations.

Writing descriptions

Descriptions give clear information about people, places or objects at particular moments in time. They focus on the main characteristics or features of particular people or things. They 'paint a picture' in words for readers.

Descriptions must be well planned. Use the structure in Source 1 or ask your teacher for a template. Descriptions must always follow a set structure, and events must be organised in chronological order.

Structure of a description	
Introduction	Introduce the subject. State the name of the person or event. Outline why the topic is important.
Body	Provide details about the person or event (including dates and important facts). Information must be organised in paragraphs, with a new paragraph for each detail. Quotations and descriptive words should be used where relevant.
Conclusion (optional)	Revisit the most important details and provide a concluding statement.

Source 1 Structure of a description

Writing explanations

Explanations tell how or why something happened. They provide the reader with a greater understanding of the causes and effects of past events. Use the structure in Source 2 or ask your teacher to provide you with a template. Explanations must be clear and factual. They should not contain opinions or emotional language. There must be supporting evidence from a variety of sources for each point made.

All historical writing needs to be acknowledged. At the end of your writing you must always include a full reference list or bibliography. This list shows your readers the range of different sources of evidence you used and where they can be found. For detailed information on this, refer to the skill 'Identify and locate relevant sources, using ICT and other methods', which was covered on page 214.

Structure of an explanation	
Introduction	Clearly state the main idea or aim. Briefly outline the reason/s why an event occurred and its effect/s.
Body	Each idea must be supported by evidence. There should also be some analysis of the evidence to explain its significance Information must be organised in paragraphs, with a new paragraph for each detail. Language should be precise and not contain emotional words. Personal opinions (e.g. 'I' or 'my') should be avoided.
Conclusion (optional)	Provide a short and clear overview of the main ideas presented in the body. State a conclusion drawn from the evidence.

Source 2 Structure of an explanation

Selecting and using a range of communication forms and digital technologies

The presentation of your findings is one of the most important aspects of your inquiry because it draws together all of the sources, evidence and findings of your investigation.

There are a number of ways to effectively and impressively communicate your findings. For example:

- oral – speeches, class presentations, re-enactments, interviews and role plays
- graphic – posters, cartoons, graphic organisers and models
- written – descriptions, explanations, class newspapers, scripts, letters and diaries
- digital – audiovisual presentations, websites, films, blogs, wikis and apps.

All of these communication forms can add colour and life to the presentation of historical information.

skill**drill**

Creating an audiovisual presentation

One of the most popular ways to present the findings of a historical inquiry is to create an audiovisual presentation. To prepare and present a successful presentation, there are several steps to follow.

Step 1 Gather your research

Make sure that you have collected everything that you have found out in your historical inquiry. This will include any written research or findings, a list of sources you have used, and a range of relevant images and/or photographs. If you have been working in a group, this may involve collating your research with other members of your class.

Step 2 Plan and create your presentation

Once you have gathered your research, you will need to decide on the best way to deliver your findings. You may choose to use Microsoft PowerPoint or Prezi. Alternatively, you may like to create a website or short film to show to the class. How you will present your findings may depend on the criteria set by your teacher. It is important to check these before your presentation so that you can ensure you are meeting all criteria.

Step 3 Deliver your presentation

Keep the following things in mind:

- Practice makes perfect – rehearse your presentation before coming to class, especially if you are working in a group. Make sure each member of the group knows exactly what they have to do.
- Prepare for the worst – make a backup copy of your presentation in case anything unexpected occurs, such as data loss.
- Engage the audience – make eye contact, do not read from your notes and prepare cue cards to help you remember your lines. Speak clearly and make your text and layout as visually appealing as possible.
- Check for errors – make sure any audio and visual material contains no factual or spelling errors.
- Speak slowly – focus on the purpose of your presentation and do not become distracted.
- Finish strongly – end on a high note!

Apply the skill

1 Follow the steps outlined above to prepare and present a brief audiovisual presentation on an aspect of World War I that interests you.

Check your learning 6.6

Remember and understand

1 Why do you think history has been described as the study of 'who we are and why we are the way we are'? Do you think this is an accurate description?

2 In your own words, define the term 'chronology'. Why is it an important skill for historians?

3 What is one of the most useful tools for organising significant historical events into chronological order?

4 What is the purpose of a description? How is this different from the purpose of an explanation?

Apply and analyse

5 Your teacher has asked you to provide a written report on the significance of the Gallipoli campaign. Would it be more appropriate to write a description or an explanation? Explain your choice.

Evaluate and create

6 Choose a significant issue or event of interest to you that took place between 1750 and 1918. Conduct research and create a timeline that features a number of entries related to the issue or event you have chosen. Some events you may like to examine include:

- the invention of the telephone or motorbike during the Industrial Revolution
- how the Commonwealth of Australia was formed through a process known as federation
- World War I.

a Your timeline should include at least six entries related to the issue or event. Each entry must include the date and a brief description.

b You should also include images related to at least two of the entries on your timeline.

c Present your timeline electronically or as a poster.

6.7 Careers in history

There are a wide range of jobs and careers linked to the study of history. Because many aspects of society, culture and technology change so quickly these days, the need to preserve stories and artefacts from the past has become more important than ever. An appreciation of events from the past can help members of a community or citizens of a nation avoid repeating costly mistakes (such as wars) and make better plans for the future.

Today, many employers recognise that historical research and analysis skills are essential for a wide range of careers. As a result, these skills are in demand and there are many jobs and career paths linked to your study of history at school. Some jobs relate to the study and protection of our heritage, while others involve working out in the community. A selection of these jobs is listed in Source 1.

Studying and protecting our heritage

Many historians are involved in collecting, conserving and restoring important artefacts and records from the past. Historians are also involved in selecting and protecting significant objects and records from the present day so they can be studied by future generations. These collections are kept in museums, art galleries, government buildings and not-for-profit organisations. They can be accessed and used by anyone interested in finding out more about the past. Historians work in a wide range of fields. There are curators who look after precious collections, exhibition designers who help to present artefacts to the public and education officers who organise talks and presentations for the public, especially school students. A new and growing career path for historians involves studying, photographing and cataloging rare and important artefacts and physical collections so that they can be displayed online. Online collections allow people all around the world to access important historical sources from the past.

Source 1 Studying history can lead to many interesting and exciting career paths.

Studying and protecting our heritage	Working out and about	Related opportunities
Museum curator	Archaeologist	Writer
Art gallery manager	Tour guide	Information manager
Oral historian	Film and TV consultant/ Location scout	Lawyer
Archivist	Building restoration	Publisher
Conservator	Heritage officer	History teacher
Exhibition designer	Documentary film maker	Film and TV production assistant
Genealogist	Urban planner	Records management
Museum education officer	Surveyor	Foreign affairs

Career profile: Michelle Stevenson – coordinator of Humanities Collection Online

Michelle Stevenson works for Museum Victoria on the development and implementation of digital projects using objects from Museum Victoria's large collections. Museum Victoria's collections cover everything from Indigenous Australian history to Antarctic exploration to film and television in Victoria. Because of this, a strong and broad knowledge of Australian history is essential. Michelle has worked on a range of projects, including:

- creating digital labels for exhibitions in the museum's galleries
- working with developers to create historic walking-tour apps
- project managing the creation of virtual exhibitions to be viewed online.

Michelle creates some of this content herself and relies on all her historical skills when she is researching and writing about different collections and objects. Depending on the project, this can include using books and journal articles, archival materials and other collection materials and conducting interviews. Michelle believes history is all about stories. She loves uncovering the hidden stories behind objects from the past and sharing them with other people.

Michelle's other passion is alpine skiing. She has found a clever way to combine her love of history with her love of the sport. She is currently completing a PhD in the history, development and significance of skiing in Australia and in her free time is curator of the National Alpine Museum of Australia, a small community museum that explores stories of Australian alpine life and winter sport.

Working out and about

Not all career paths in history mean you will be working inside. Studying history also provides many opportunities for people who prefer to travel or spend their time outdoors. Urban planners help to plan the development of towns, cities and buildings in Australia and all around the world. They work with councils to decide on appropriate uses for land. They need to have an understanding and appreciation of heritage issues in cities and recommend new developments that blend in with older buildings. Specialist planners are known as heritage officers. They look at the conservation value of older areas and buildings, deciding what should be kept or restored. Before any big, new development happens, archaeologists may also be called in to work with heritage officers and explore the area for evidence of past use. Old urban areas can be a treasure trove of objects from the past – old pots, coins, bottles and even bones can be important objects from our past that need to be protected.

Related opportunities

Bill Gates, the founder of Microsoft and one of the richest men in the world, has often employed history graduates. Gates commented that he prefers history graduates because of the way they learn to think about the world and because they are able to consider many different aspects of an issue at once. History graduates are also sought after in fields such as law, politics and foreign affairs. History not only teaches us to understand more about societies and cultures around the world today but also how to locate, evaluate and analyse information. Most importantly, a study of history teaches us to test assumptions and support statements and hypotheses with evidence. The ability to sift through large amounts of information and work out what is important in the detail is essential in professions such as law and politics.

Source 2 Michelle Stevenson helps share Museum Victoria's collections with new audiences online.

Check your learning 6.7

Remember and understand

1 What reasons does Michelle Stevenson give for her love of history?

2 What sort of projects is Michelle Stevenson involved with at Museum Victoria?

Apply and analyse

3 What skills do history graduates have that make them sought after in areas such as law and foreign affairs?

4 Why do you think it is important for an urban planner to have an understanding of history?

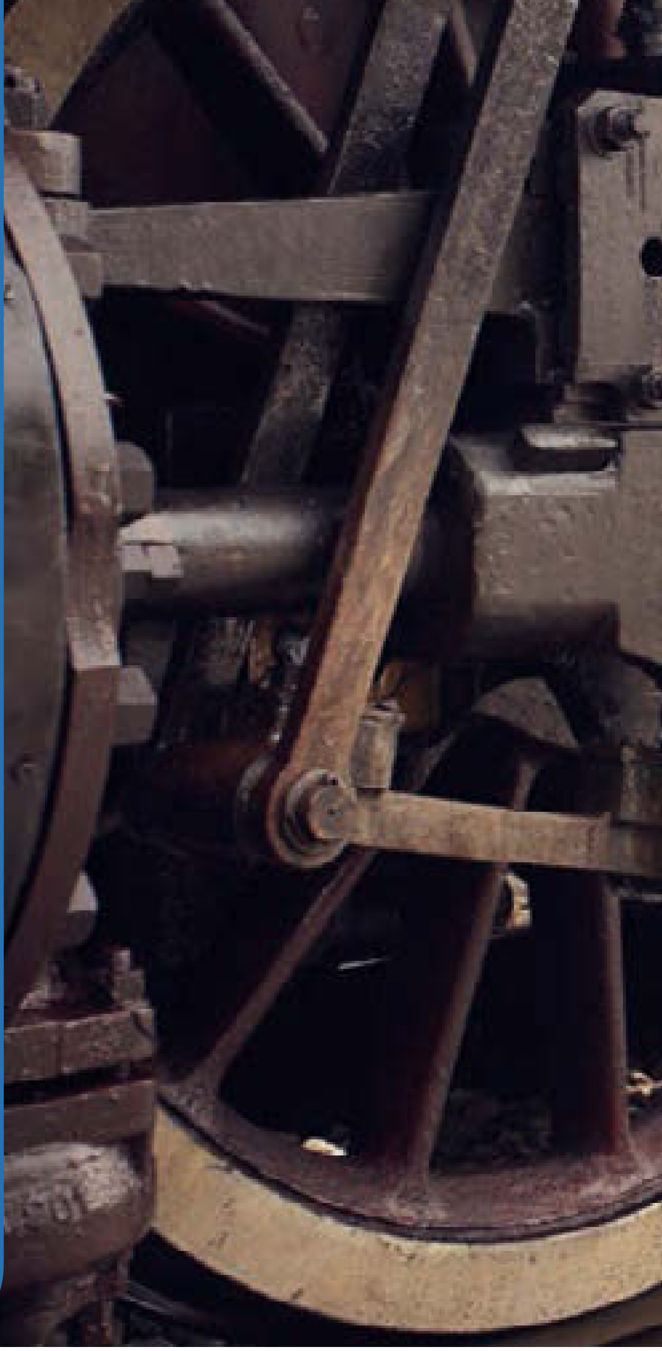
Evaluate and create

5 Create a design brief for a historical walking-tour app of your school's local area.
   a What landmarks would you include?
   b How would you present information in an interesting visual format?
   c Write the guide's commentary for the app.

Overview

The making of the modern world

The years from 1750 to 1918 are some of the most interesting and significant in human history. It was a time during which our modern world was born. During the period, enormous changes took place that affected the way in which people all around the world lived, worked and thought. It was a period of empire building that saw the colonisation of new territories such as Australia. It was also a period of rapid industrialisation that saw the spread of new technologies and birth of many new ideas and social movements. These changes were so dramatic, that they became known as the Industrial Revolution. Towards the end of the period, in 1914, World War I broke out. By the war's end in 1918, the world was a very different place. Once-powerful empires were broken up and new nations were created in their place.



7A

What factors shaped the modern world from 1750 to 1918?

7B

What were the key events of World War I?

chapter 7

Source 1 The invention of the steam engine was one of the most significant events leading to the Industrial Revolution. It led to the development of many steam-powered engines and machines such as the steam locomotive.

7.1 Key features of the modern world from 1750 to 1918

Defining the modern world

Most historians agree that the modern world (also known as the industrial world) developed from the 1750s onwards. They use the term 'modern world' to describe this period mainly because the developments that took place from this time onwards are familiar to people in Western societies today – for example, systems of law and government still followed in countries like Australia, Britain and the United States all took shape at this time. Other examples include:

- the mass production of goods in factories (see Source 1)
- the mass movements of people to cities and towns
- the establishment of trade unions and workers' rights
- mass **migration** of people from across Europe to colonies in the **New World**
- the start of rapid transport and mass communication
- organised public education and schools.

The expansion of European empires

From the late 16th century onwards, major European powers – such as Britain, France, Spain and Portugal – all competed to increase their control of new territories across the globe – a practice known as imperialism. Colonies were valued not only for the additional power and military advantages they could provide, but also because they delivered access to a range of raw materials like timber, cotton, coal and gold. These materials became the driving force behind the development of a range of industries in Europe. They also made imperial powers extremely wealthy.

Raw materials from colonies across the British Empire fuelled the Industrial Revolution. These materials included wool and gold from Australia; cotton, sugar and tobacco from the Americas; gold and diamonds from Africa; and spices, fabric and tea from India.

Source 1 Factories such as this one in Vermont, USA, were the driving force of the Industrial Revolution. They allowed raw goods to be manufactured and sold in large quantities. Much of the workforce at the time consisted of young children.

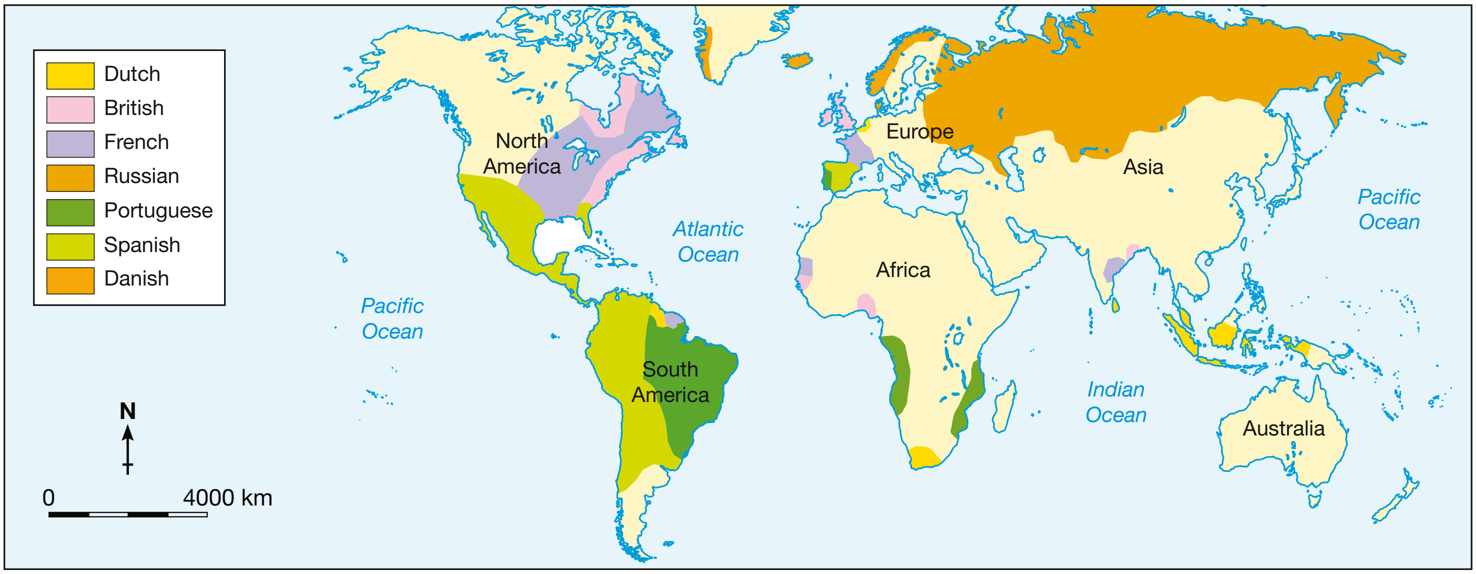
In addition to raw materials, the overseas colonies became valuable markets in which to sell the products manufactured from those raw materials for a profit (e.g. cloth made from cotton and cigarettes made from tobacco). In this way, European empires profited not once, but twice from their colonies around the world.

A comparison of world maps in 1750 and 1900 reveals how quickly European empires expanded their territories over a period of 150 years (see Sources 2 and 3).

Newly formed countries such as Italy and Germany aggressively looked for colonies at the end of the 19th century so that they could compete with the major powers in Europe such as Britain and France. This rivalry over colonies around the world was one of the key factors that contributed to the outbreak of World War I in 1914.

At the end of World War I in 1918, the British Empire reached its peak. By that time, it controlled approximately a quarter of the world's population and land mass. Many of these colonies were vital during World War I, as they provided local support and supplies for the British war effort.

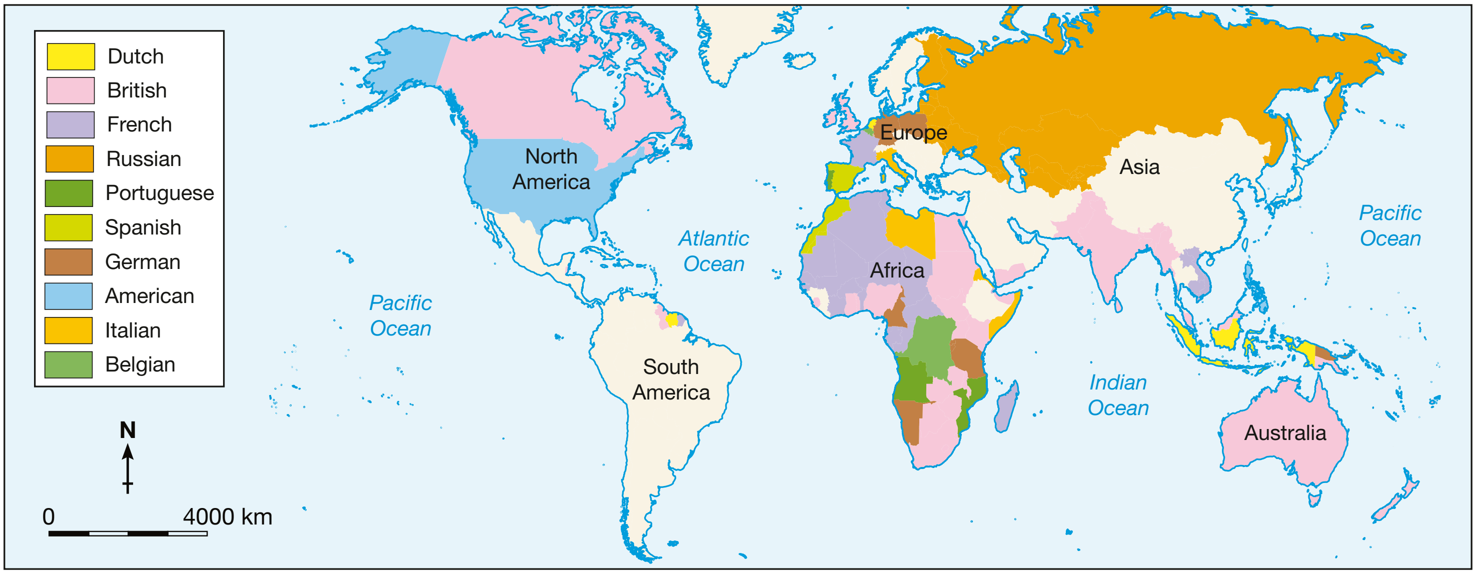
WORLD: COLONIAL EMPIRES IN 1750


Dutch
British
French
Russian
Portuguese
Spanish
Danish
North America
Atlantic Ocean
Pacific Ocean
South America
Europe
Asia
Africa
Pacific Ocean
Indian Ocean
Australia
N
0
4000 km

Source 2

Source: Oxford University Press

WORLD: 2 COLONIAL EMPIRES IN 1900


Dutch
British
French
Russian
Portuguese
Spanish
German
American
Italian
Belgian
North America
Atlantic Ocean
Pacific Ocean
South America
Europe
Asia
Africa
Pacific Ocean
Indian Ocean
Australia
N
0
4000 km

Source 3

Source: Oxford University Press

Check your learning 7.1

Remember and understand

1. What is meant by the term 'modern world'? When do most historians agree it began?
2. Why were distant colonies such important assets to European powers during the 19th century? In what ways did imperial powers profit from them?
3. What percentage of the world's total population and land mass did Britain control by 1918?

Apply and analyse

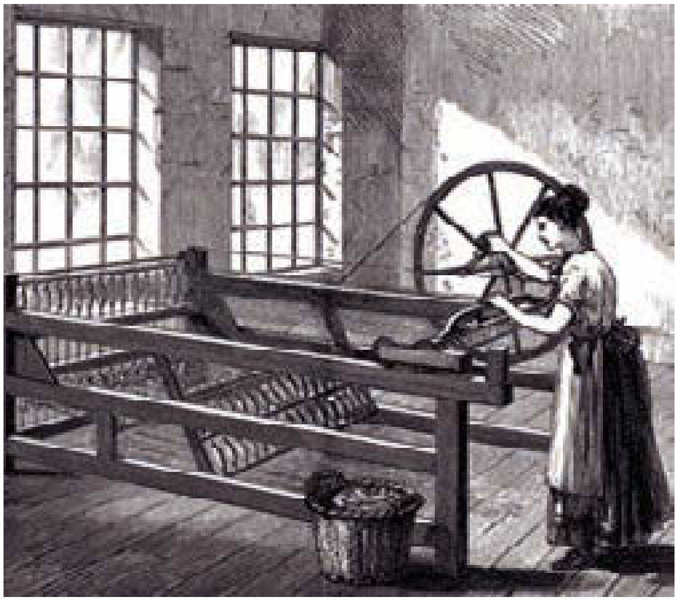
4. Examine Sources 2 and 3.
   - **a** List the three European powers that controlled the most overseas colonies in 1750.
   - **b** List the three European powers that controlled the most overseas colonies in 1900.

What changes in European empires and territories took place between 1750 and 1900?

7.2 The Industrial Revolution

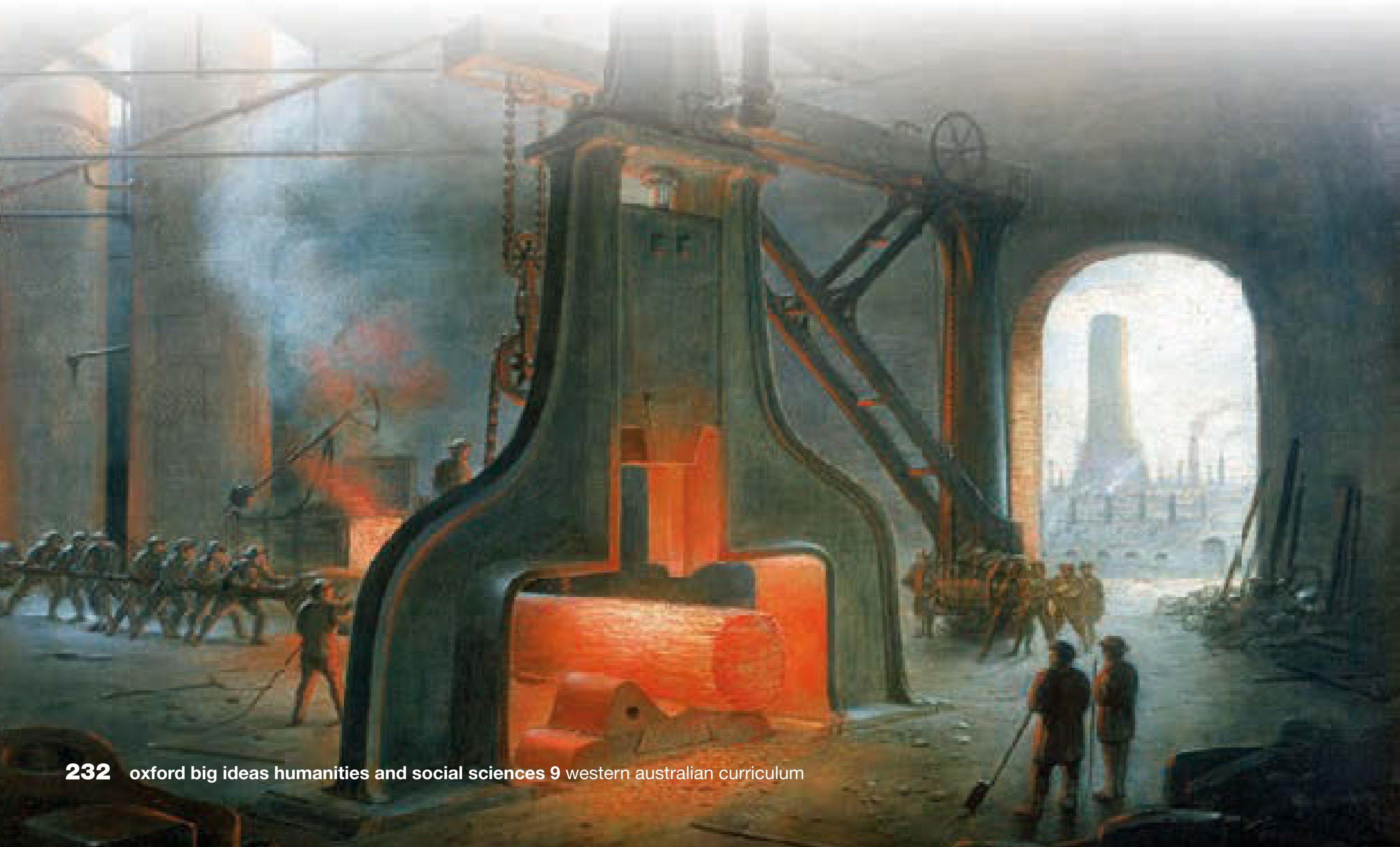
The Industrial Revolution first began in Britain around 1750. Many historians argue that the Industrial Revolution was only possible because of a series of changes in farming practices that paved the way for the country to increase its population and improve its production and manufacturing methods. These changes in farming methods – now referred to as the **Agricultural Revolution** – were gradual. They began in the middle of the 17th century and continued through the 19th century. Without them, the Industrial Revolution would not have taken place.

One of the main features of the Agricultural Revolution was the fencing off of thousands of small areas of shared common land that had previously been used by local farmers to grow food. During the Agricultural Revolution, these smaller areas of land were joined to create larger farming areas. This process, known as the **enclosures**, benefited wealthy



Source 1 Textiles industry: the spinning jenny, invented in 1764

Source 2 Manufacturing industry: the steam hammer, invented in 1840



people who were granted rights to farm these larger areas of land for profit. The enclosures, together with innovations in farming machinery and animal breeding, meant that more crops could be grown and more animals could be raised by far fewer people. Overall, farming became much more efficient but this took place at the expense of poor people who relied on common land for their daily needs.

During the Agricultural Revolution, farm workers and their families were forced from their homes, and people moved away from rural villages to towns and cities in search of work. They became a new class of workers that fuelled the spread of the Industrial Revolution. These people provided a much-needed labour force to operate the new factories and mills in rapidly expanding cities.

Key inventions and innovations of the Industrial Revolution

Over the course of the Industrial Revolution many industries across Britain underwent a period of huge change. These changes were brought about by new inventions (such as machinery) and ways of organising workers (such as the invention of the factory). The industries in Britain that underwent the most serious and rapid change included:

- the textiles industry – see Source 1
- the manufacturing industry – see Source 2
- the transport industry – see Source 3
- the communications industry – see Source 4.

The first industries that were transformed by innovations in the Industrial Revolution were related to the production of iron, coal, cotton and wool. Inventions and new practices in one industry tended to affect others. For example, the development of coal-powered steam engines led to an increased demand for coal. The expansion of new and deeper coalmines required better steam engines for the pumping machines that removed water from the bottom of mines. Improved steam engines could power hundreds of spinning and weaving machines and led to the spread of large factories and mills across England. As steam engines developed, they also powered new modes of transport, including steam-powered trains and ships, and were later used to generate electricity.

Source 3 Transport industry: the steam train, invented in 1801

Source 4 Communications industry: the telephone, first patented in 1876

Living and working conditions

Working conditions for British factory and mine workers in particular were harsh and demanding during the Industrial Revolution. Men, women and children worked in unsafe conditions and for many hours – six days a week and up to 16 hours a day. Through the 19th century, demand for reforms to regulate working conditions grew louder in Britain, particularly for child labour. This led to a series of government inquiries and legislation that regulated the minimum employment age, wages and the length of the working week. By the 1870s, for example, no child under 10 could be employed in factories and education for children under 10 was compulsory.

Living conditions for factory workers were also appalling. Many workers lived in slum areas close to the factories where they were employed (see Source 6). Families had no choice but to live in overcrowded conditions, often with no access to fresh water or proper sewerage. Consequences of these unhygienic living conditions included regular outbreaks of disease, a low life expectancy (just 29 years, in Liverpool in 1865) and a high infant mortality rate.

Many writers of the time were appalled by the plight of the working poor whose work seemed unrewarding and whose lives were cut short by poverty, disease and injury. This period led to calls for social reform and also saw the formation of workers' groups, such as **trade unions**.

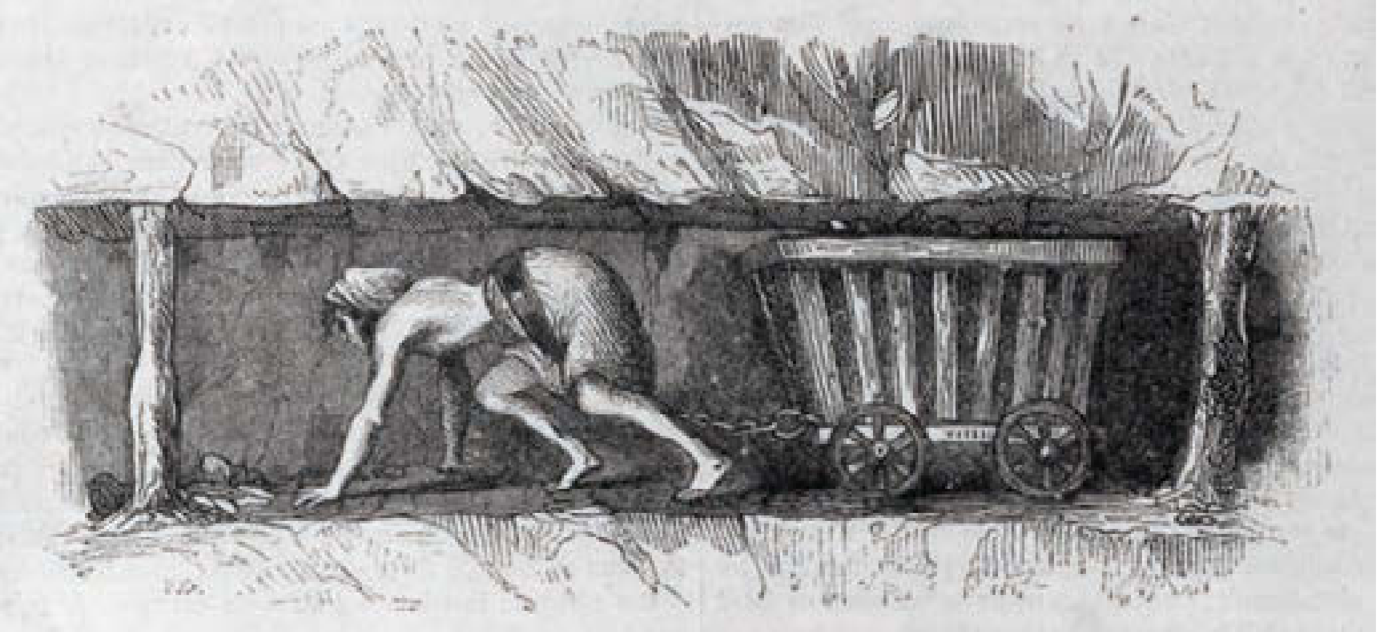
Towards the end of the period, conditions improved for many people. Slums were torn down to be replaced by new houses that provided heating, running water and sewerage systems. There were also a number of other benefits for workers in cities brought about by the Industrial Revolution. For example:

- improvements in farming made food cheaper and more plentiful
- mass-produced goods, such as clothing and furniture, became more affordable
- improved public transport allowed workers to live away from factories in the newly developed suburbs
- street lighting transformed city life, encouraging people to enjoy entertainment at theatres and in music halls at night.

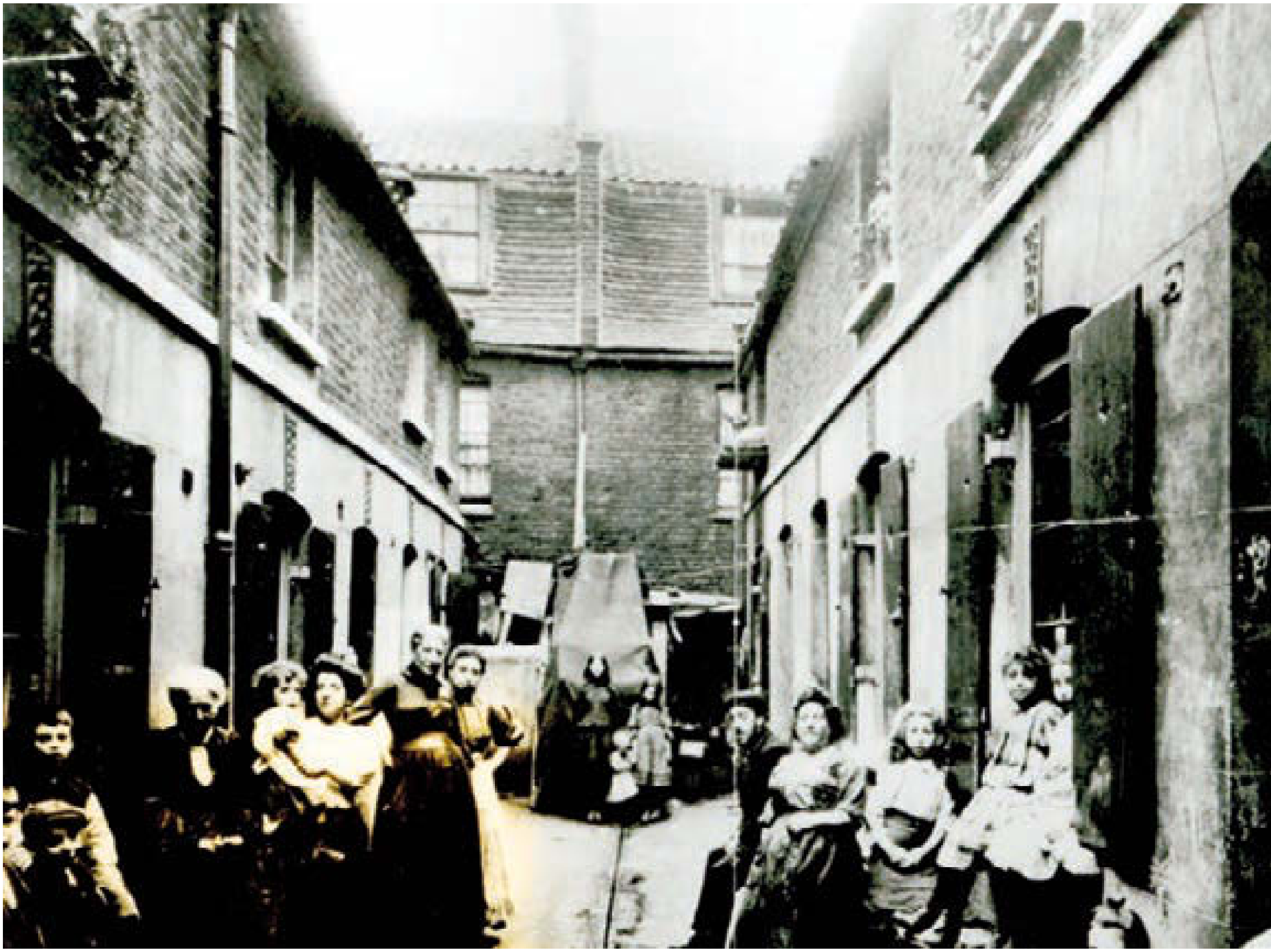
Long-term impacts of the Industrial Revolution in Britain

The Industrial Revolution had significant impacts for Britain and its people. It transformed Britain's economy, which became (for a time) the world's leading economic and industrial power. Britain's population quadrupled from an estimated 6.5 million people in 1750 to more than 27.5 million in 1850 as living standards improved and death rates decreased.

Britain changed from an agricultural society to an urban society, with most people living in towns and cities where work could be found. In the growing towns and cities, a 'middle class' emerged: people who were neither landowners nor workers, such as bankers, shopkeepers, teachers and administrators. Suburbs surrounding the cities later developed.



Source 5 This illustration shows a girl employed as a 'hurrier' at a coalmine. Her job was to pull heavy coal carts along dark, narrow tunnels, using a harness and belt.



Source 6 People living in a 19th-century London slum. Conditions were often crowded and unsanitary.

Check your learning 7.2

Remember and understand

1 Why was steam power so important to the Industrial Revolution?

2 Name four industries that underwent rapid change during the Industrial Revolution in Britain.

3 What was the Agricultural Revolution? What effect did it have on farmers using common land to grow food?

4 What happened to the population of Britain as a result of the Industrial Revolution?

Apply and analyse

5 Why would the Industrial Revolution not have been possible without the Agricultural Revolution?

Evaluate and create

6 Working conditions during the Industrial Revolution were very different from the way they are today. As a class, share your knowledge of working conditions for men, women and children during the Industrial Revolution. How do they compare with working conditions in Australia today?

7.3 World War I

World War I fundamentally changed many aspects of Australian government and society. Our country's involvement in World War I also played an important part in the development of our idea of Australia as a nation, and our place in the world. Knowing about the history of Australia at war helps us to gain a clearer understanding about the world beyond our shores, and about how our own history, national character and identity developed. Understanding how wars begin is also one of the best ways to prevent them.

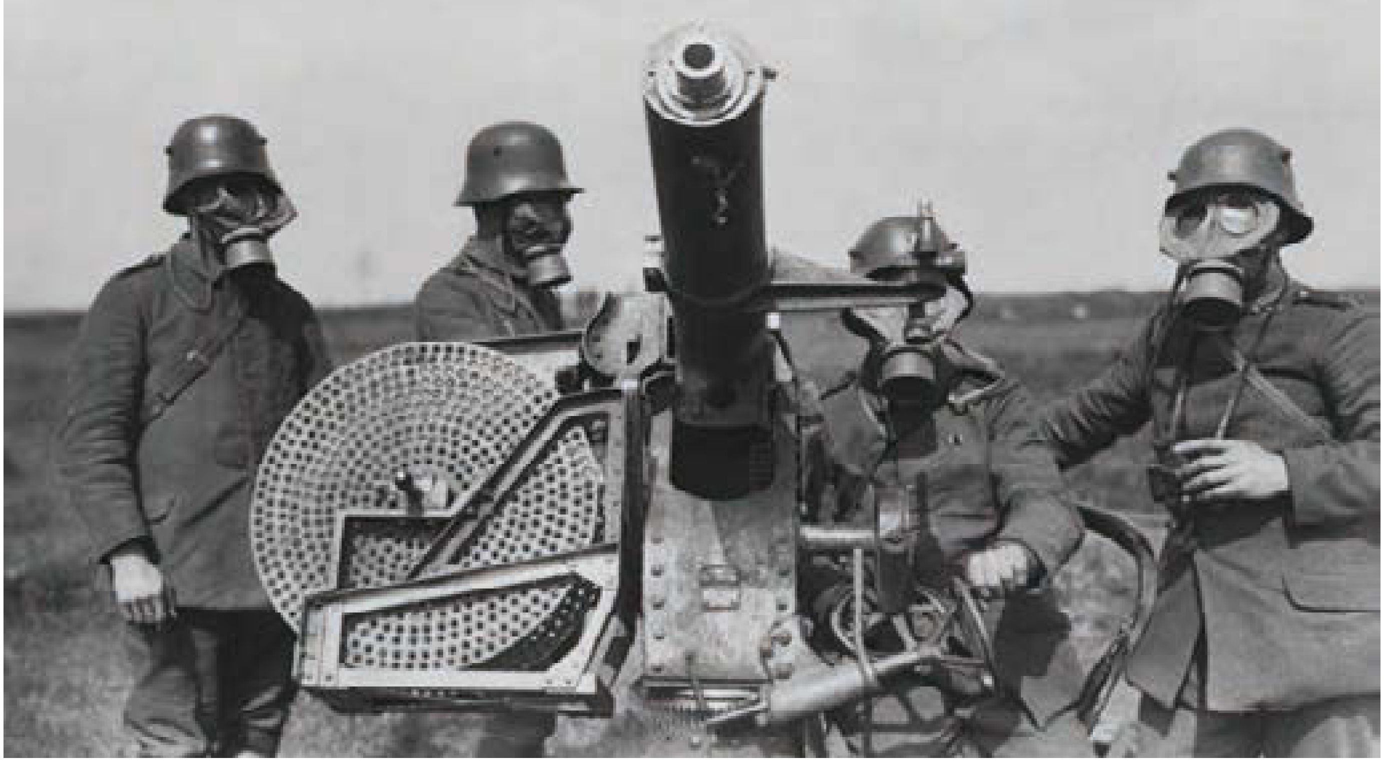
In *Depth Study 2: Investigating World War I (1914–1918)* you have the opportunity to learn in detail about:

- the main causes of the war and the reasons why men enlisted to fight
- the places where Australians fought and the nature of warfare (including the Gallipoli campaign)
- the impact that the war had on Australia and the world (including the changing role of women and the public debate around compulsory military service, known as **conscription**)
- the ways in which the war is commemorated (including debates about the nature and significance of the Anzac legend).

World War I was a horrific experience for those involved. It is estimated that 10 million people were killed and 20 million wounded as a result of actual combat. Although official statistics vary, most countries involved suffered horrendous losses. There are also civilian casualties to be taken into consideration. Australia lost over 50 000 soldiers, a huge toll in a population of 4.5 million, it meant over 1 per cent of the population were victims of the war.

A study of World War I can sometimes be overwhelming given the complexity of the events and number of countries involved. The following tables provide a quick reference to some of the main issues and events of World War I and Australia's involvement in them. They provide an overview and summary of all content within the depth study and can be used to help you navigate the topic and guide your understanding of key points.

Source 1 On 25 April 1915, members of the Australian Imperial Force (AIF) landed on the beach at Anzac Cove in Turkey with troops from New Zealand, Britain, and France. This was the first major military action fought by Australian and New Zealand forces during World War I. Each year it is commemorated on Anzac Day.



Source 2 New weaponry used in World War I, such as machine guns and poisonous gas, changed the nature of warfare from previous wars.

The causes of World War I, why men enlisted and where Australians fought		
Causes of World War I	Topic 9.3	• Long-term factors contributing to the outbreak of conflict in 1914, including nationalism, rivalry over colonies, the arms race in Europe, Europe's alliance system and military plans • Events leading to war after the 'July crisis', which followed the assassination of Archduke Franz Ferdinand
Where was World War I fought?	Topic 9.7	• Major campaigns involving Australian forces: Gallipoli campaign (Turkey) 1915; campaigns on the Western Front (France and Belgium) 1916–18; campaigns in the Middle East 1916–18
Australia's entry into World War I	Topic 9.5	• Varied reasons motivated men to enlist, including loyalty to Britain, spirit of adventure, the experience of war unknown to most Australians

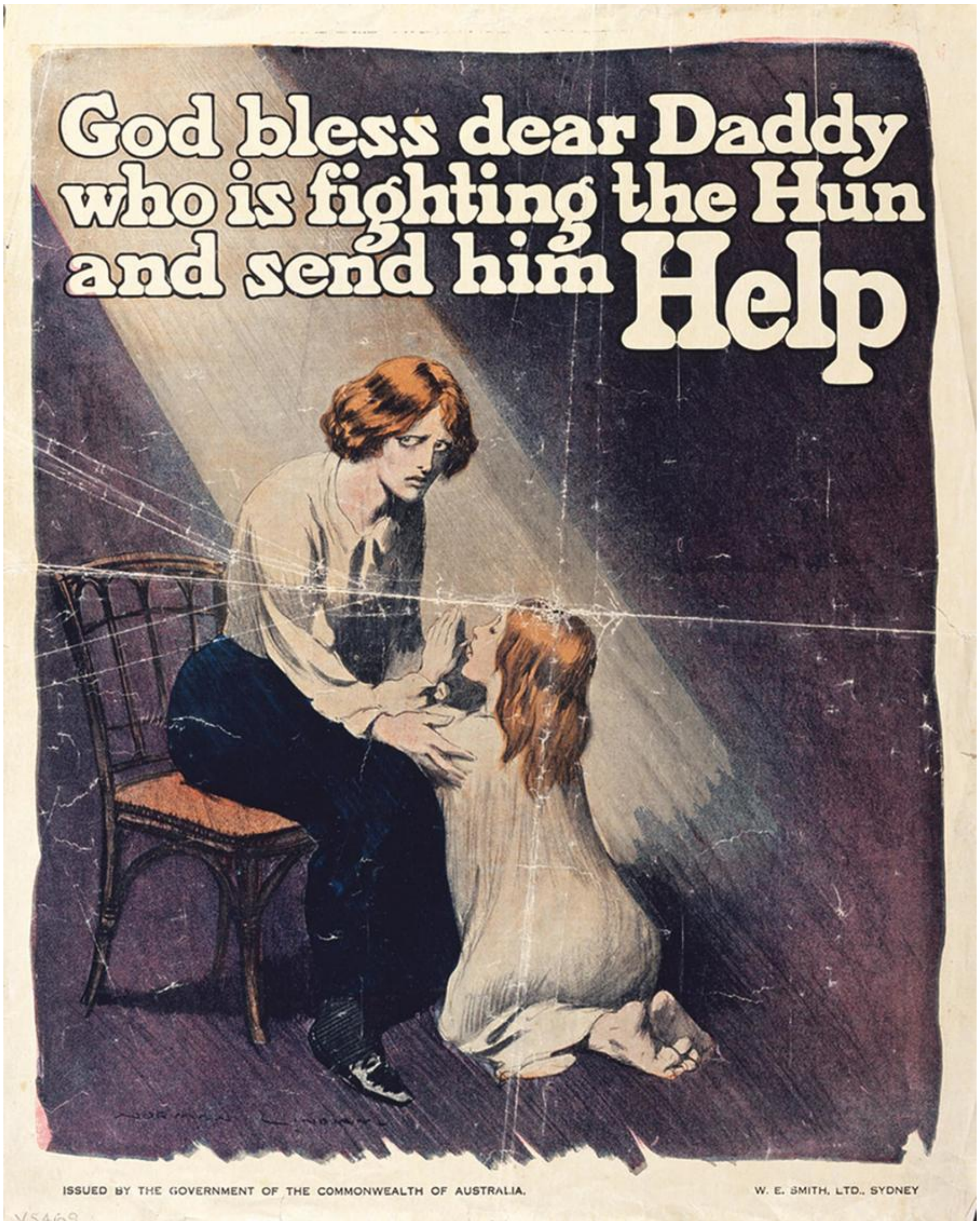
Significant campaigns and the scope and nature of warfare		
The Gallipoli campaign	Topic 9.10	• Landing of troops at Anzac Cove on 25 April 1915 • Attacks and counter attacks by Anzac and Turkish soldiers over eight months, including fighting at Lone Pine and the Nek • Withdrawal of Anzac troops in December 1915
The Western Front	Topic 9.8	• Defensive warfare using machine guns, trenches and barbed wire • Series of attacks and counter-attacks using artillery fire, then infantry charges involving close fighting with rifles, bayonets and grenades • Appalling conditions for soldiers living in the trenches
The nature of warfare in World War I	Topic 9.6	• Theatres of war in World War I: the Middle East, the Western Front and the Eastern Front in Europe, the North Sea, Turkey, northern Africa • New weapons technology – machine guns, heavy artillery, poison gas, tanks, planes and Zeppelin airships • New communications technology – telephone, wireless radio • Both sides evenly matched, resulting in stalemate on the Western front

An overview of the impact of World War I on Australia at home

The conscription debate	Topic 9.14	• During World War I, a decline in enlistments and heavy casualties on the Western Front caused Prime Minister Billy Hughes to call for two plebiscites (public votes) on compulsory military service (conscription) in 1916 and 1917, with both resulting in a majority of 'no' votes (see Source 4). • The conscription debate was a hugely divisive issue in Australian society.
Use of government propaganda	Topic 9.14	• During World War I, the government issued pro-conscription and anti-German **propaganda**, including flyers and posters. Propaganda was designed to glorify the efforts of Australian soldiers overseas, maintain public anger towards the enemy, motivate people to join the war effort and regulate their behaviour.
Changing roles of women	Topic 9.13	• During World War I, women moved into previously male occupations to support the war effort, with an expectation they would return to domestic roles and traditional occupations after the war.
Internment of 'enemy aliens'	Topic 9.15	• During World War I, people with German backgrounds or who were born in countries at war with Australia were interned (imprisoned) in remote camps to isolate them from the general public.
War time controls and censorship	Topic 9.12	• During World War I, extension of Commonwealth powers allowed the government to collect income tax, censor media and communications, control the movement of 'enemy aliens', among other war time controls.
Participation of Aboriginal and Torres Strait Islander Peoples	Topic 9.5	• During World War I, Indigenous Australians attempting to enlist were initially turned away, but by 1916 changes were made so that 'half-castes' could enlist. Over 400 Indigenous Australians fought in the army, although at this time they could not vote and were not counted as Australian citizens.

Compressed Cooked
FRAY BENTOS
CORNED BEEF
OXO LIMITED
THAMES HOUSE, QUEEN ST PLACE
LONDON. E.C.
17 OZ. NET WT. AVD.
HEINZ
ESTD 1869
BAKED
RED
KIDNEY BEANS
HEINZ
57 VARIETIES
PURE FOOD PRODUCTS
REG. U.S. PAT. OFF.
H.J. HEINZ CO. PITTSBURGH, U.S.A.
MAKERS
FREE FROM BENZOATE OF SODA, OTHER DRUGS
OR ARTIFICIAL PRESERVATIVE.

Source 3 Tins of Fray Bento and Heinz eaten by soldiers during World War I


God bless dear Daddy who is fighting the Hun and send him Help
ISSUED BY THE GOVERNMENT OF THE COMMONWEALTH OF AUSTRALIA.
W. E. SMITH, LTD., SYDNEY

Source 4 An Australian propaganda poster produced in Australia around 1918. The poster was designed to encourage Australians to vote in favour of compulsory military service (conscription) in a public vote that was held in Australia during the war. The word 'Hun' is a derogatory term used to refer to Germans.

Check your learning 7.3

Remember and understand

1 How many Australian soldiers died during World War I? At the time, what percentage of the population was this?

2 What is propaganda and why was it used by the Australian government during World War I?

Apply and analyse

3 In your own words, define the term 'conscription'. Why did the conscription debate in Australia divide the public?

7.4 The significance of World War I

World War I left Europe devastated. In January 1919, the victorious nations met at the Paris Peace Conference in France to come up with a plan for rebuilding Europe and ensuring peace in the future. After months of negotiations, the **Treaty of Versailles** was signed on 28 June 1919. This document officially ended World War I and forced Germany to accept responsibility for starting the conflict. It also ordered Germany to pay **reparations** to the Allied Powers.

As a result of the war, the map of Europe was redrawn. Four major European empires – the Austria–Hungary Empire, the Russian Empire, the German Empire and the Ottoman Empire – were broken up and a number of new countries were created in their place. The ruling monarchies of these empires all lost power. The Russian Tsar was overthrown by a communist revolution in 1917; Austria–Hungary was broken up into a number of newly formed states including Yugoslavia and Czechoslovakia; and Turkey emerged as a modern, secular republic after the break-up of the Ottoman Empire.

However, World War I was not only a historically significant event in Europe. Far way in Australia, the events and experiences of the war had major effects on our nation's society and relationships with other countries. Australia had become a nation after Federation in 1901. Unlike many other countries, such as the United States and France, the founding of the Australian nation was achieved without the need for revolution. Instead, the Australian people created a nation founded on the principles of modern democracy through peaceful means. The events of World War I, such as the ill-fated invasion of the Gallipoli Peninsula in 1915, are often described as our 'coming of age' as a nation and our 'baptism of blood'. In many ways, World War I provided an opportunity to create a national story that expressed our national character and identity.

Source 1 A parade of Australian soldiers at the trenches on the Western Front, following capture of Pozières on 23 July 1916

An overview of the significance of the wars to Australia		
Impact of the wars on returned soldiers and civilians	Topic 9.18	• Over 300 000 Australians served overseas during World War I, with around a quarter of a million servicemen returning to Australia at the end of the war. Many returned with physical or psychological injuries. Their care and families' financial responsibilities fell on women in the community. The government established a Repatriation Department in 1917 to provide health, compensation, housing and job training for veterans.
Commemorating the war	Topic 9.18	• Commemoration services on Anzac Day and Remembrance Day both linked to World War I • Aspects of commemoration services still linked to World War I
Different perspectives on the Anzac legend	Topic 9.17	• The birth of the Anzac legend and its significance today • Differing perspectives on the place of Gallipoli in defining Australia's national identity • Differing views on what Australia should most celebrate

Source 1 An Anzac Day parade, commemorating Australian soldiers who fought in World War I and all wars since

Check your learning 7.4

Remember and understand

1 What European empires disappeared after World War I?

2 Why do so many Australians regard the Gallipoli campaign as a significant event?

3 What is the Treaty of Versailles?

Apply and analyse

4 Why do you think the Gallipoli campaign has been described as Australia's 'coming of age' and 'baptism of blood'? Do you think these descriptions are accurate? Justify your response.

Depth Study 1: Investigating the Industrial Revolution

The Industrial Revolution

The **Industrial Revolution** was a period of rapid technological change that took place from around 1750 to 1914. It began in Great Britain before quickly spreading to Europe and other parts of the world. Huge developments in farming and manufacturing changed not only the way things were produced and sold, but also how people lived and where they worked. The changes were so significant that they revolutionised many societies.

The RMS *Titanic* was one of the most important achievements of the Industrial Revolution. On 10 April 1912 after more than a century of industrial development, it set out from England on its maiden voyage to New York. The night *Titanic* sank, over 1500 people died. Like the Industrial Revolution itself, the *Titanic* was an immense achievement and a triumph of technology. It was also a disaster.

8A

What technological innovations led to the Industrial Revolution?

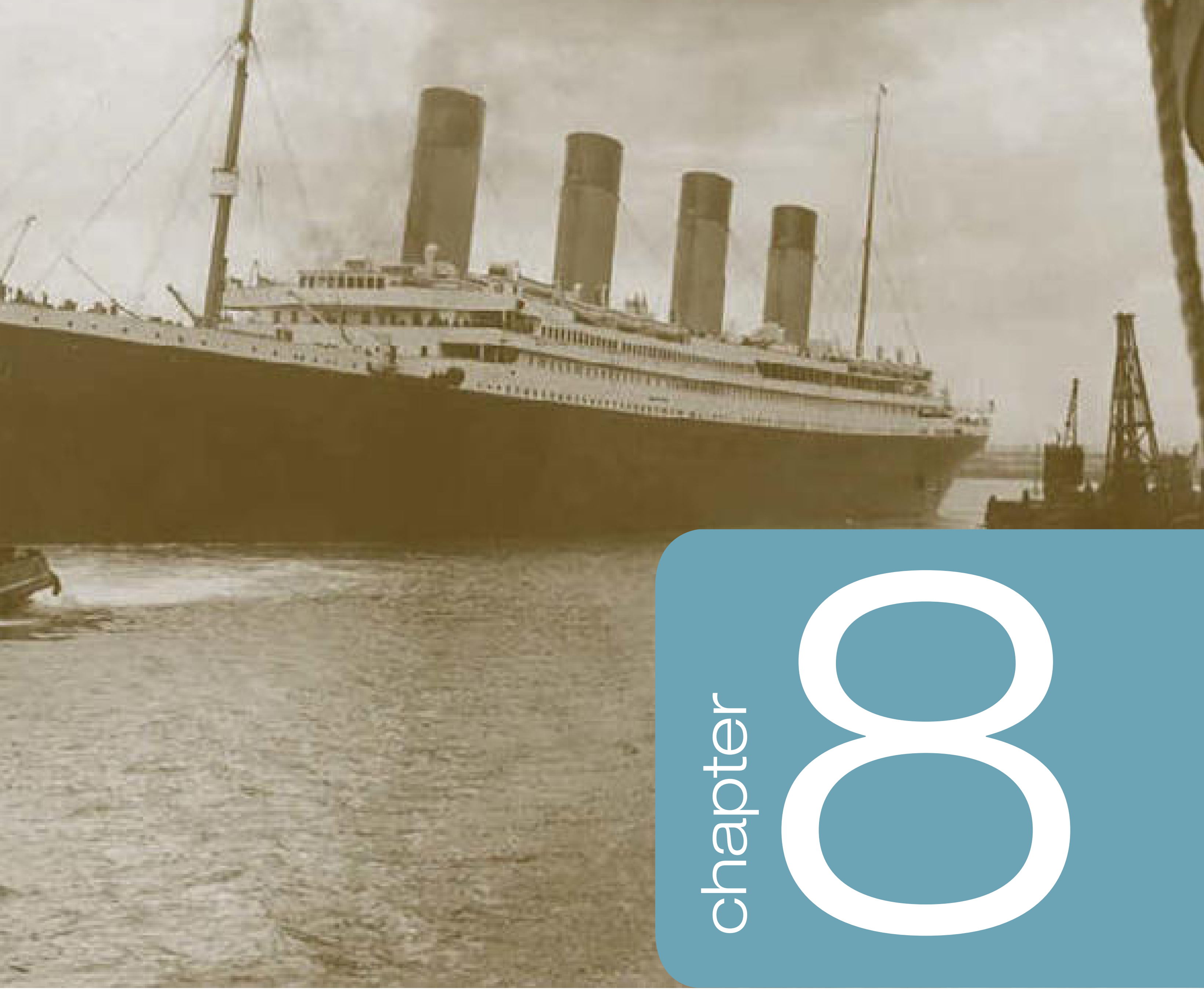
1. The Industrial Revolution was brought about by a range of technological, economic and social changes. As a class, brainstorm some examples of each.
2. Do you agree that we are in the middle of a digital revolution?

8B

How did the Industrial Revolution affect the lives of men, women and children?

1. During this period people gave up farming to find work. How do you think this affected their lives?
2. What do you think living conditions would have been like at the time?

chapter 8



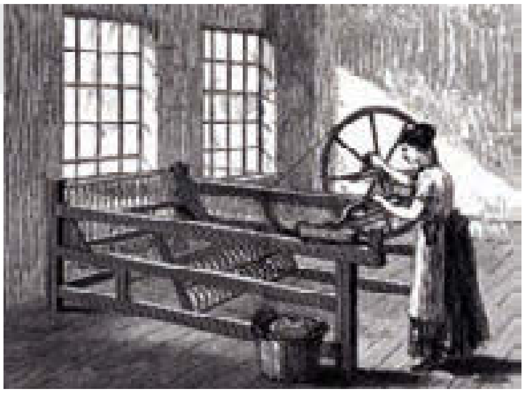
Source 1 The RMS *Titanic* leaving Southampton, England, on its maiden voyage to New York, 10 April 1912

8C

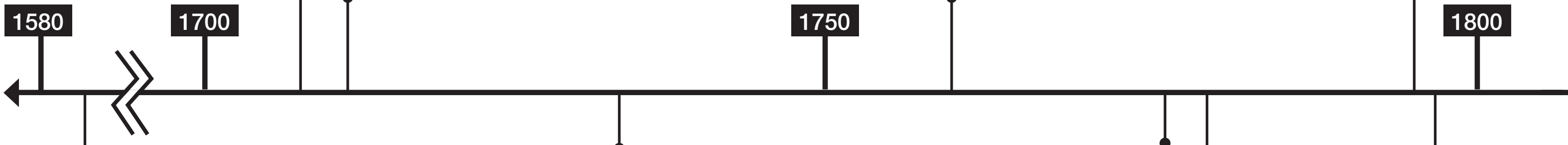
What were the short- and long-term impacts of the Industrial Revolution?

1 Industrialisation had many impacts on society and the environment. In pairs or small groups, brainstorm as many changes as you can that were brought about by the Industrial Revolution – both in the short term and long term.

8.1 The Industrial Revolution: a timeline



A woman using a spinning jenny



1589
William Lee invents the stocking frame, a mechanical knitting machine for knitting stockings. It played an important role in the early part of the Industrial Revolution.

A stocking frame, *c.* 1770

1709
Abraham Darby discovers how to make coke from coal – a more efficient fuel in the production of iron

1710
Thomas Newcomen builds a steam engine to pump water from coalmines

1733
John Kay invents the flying shuttle, allowing weavers to make larger sections of fabric at greater speed, increasing demand for yarn

The flying shuttle introduced a more efficient way of weaving.

1765
James Hargreaves' spinning jenny allows one worker to make eight times the previous amount of yarn

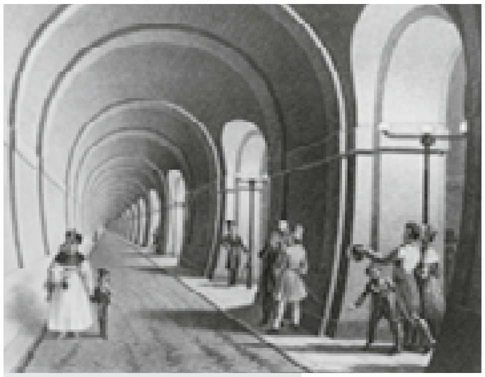
1775
James Watt creates an efficient steam engine.

1779
steam-powered mills with automatic weaving machines begin to be built

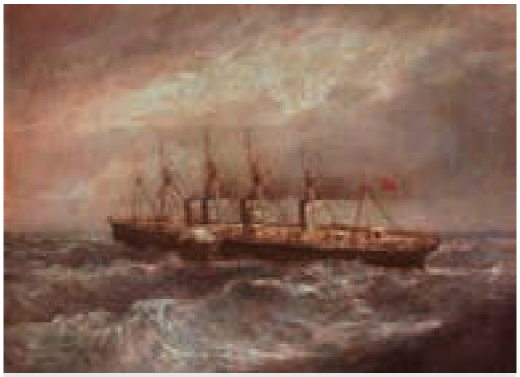
1792
inventor William Murdoch uses coal gas for house lighting

1793
Eli Whitney invents the cotton gin (engine), which can clean large quantities of raw cotton

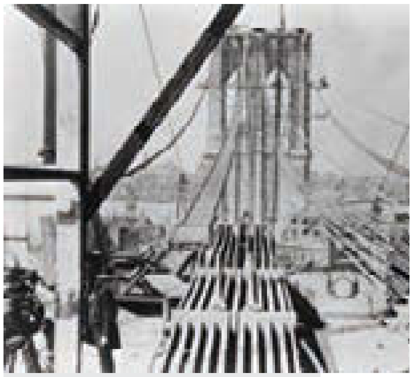
Source 1 A timeline of the key events of the Industrial Revolution



Brunel's engineering feat: the Thames tunnel



The steamship *Great Eastern* laying the first successful Atlantic cable



The Brooklyn Bridge under construction, *c*. 1878

1811
Riots begin, lasting until 1815, in which workers smash up factories and equipment in protest, fearing machines will replace them. These people become known as Luddites.

1821
Michael Faraday demonstrates the principle of an electric motor

1825
Isambard Kingdom Brunel starts building a tunnel under the Thames River; work is completed in 1842

1839
the world's first screw-propelled steamship, SS *Archimedes*, is built in Great Britain

1850

1863
bulk steel creation is made possible through the open-hearth process created by Siemens-Martin; the use of steel combined with reinforced concrete enables the construction of skyscrapers

1866
first transatlantic telegraph cable is laid

1876
Alexander Graham Bell patents his 'acoustic telegraph', or telephone

1883
the first 10-storey skyscraper is built in Chicago and the longest suspension bridge at this time, the Brooklyn Bridge in New York, is completed

1885
Karl Benz uses an internal combustion engine in the first 'automobile'

1900

1903
the Wright brothers carry out the first powered heavier-than-air flight

1908
Henry Ford uses a production line (assembly line) to produce the Ford Model T

1912
the *Titanic*, then the world's largest passenger steamship, hits an iceberg in the north-west Atlantic Ocean and sinks; 1517 people die

1915

Check your learning 8.1

Remember and understand

1 What was the 'flying shuttle' used for, and when was it invented?

2 When was the first transatlantic telegraph cable laid?

Apply and analyse

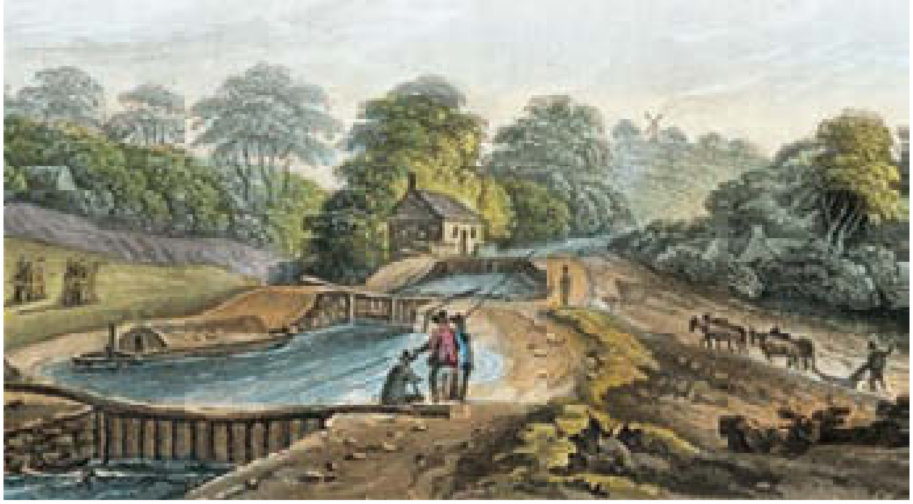
3 Using the timeline, calculate how many years there were between when the first steam engine was invented and the first aeroplane flight.

Evaluate and create

4 Conduct some Internet research to find out the dates of some other significant inventions and discoveries that occurred during the Industrial Revolution. Add these events to a new timeline in your notebook.

8.2 The Industrial Revolution in Britain

Britain before 1750



Source 1 A 19th-century artist's impression of rural life in Britain before the Industrial Revolution

Before 1750, Britain was an agricultural society. Around 80 per cent of people at the time lived and worked on small farms in rural areas. Most farms harvested small crops each year and raised small herds of livestock (such as sheep and cattle). Despite the small scale of most English farms, agriculture was still the main economic activity in Britain.

By comparison, manufacturing, mining and trade employed relatively few people in Britain. For the most part, manufacturing was small and localised. Tools used in the manufacture of most goods (such as carts, mills and looms) were basic and powered by people, animals or waterwheels that harnessed the power of fast-flowing rivers and streams.

Towns and villages at the time were small and self-contained. Roads linking villages were poor and most people travelled on foot or by horse. In fact, Britain's road system had not improved much since the fall of the Roman Empire, around 1300 years earlier. As a result, most people rarely travelled far from the places where they lived and worked.

In most cases, the working day began at sunrise and ended at sunset. People's diets were inadequate and average life expectancy was short. Illness was common because of poor hygiene, bad or non-existent sewage systems, and polluted water supplies.

British society was divided into strict social classes according to wealth and position based on birth. The aristocratic (noble) families made up only 1 per cent of the population but controlled about 15 per cent of Britain's wealth. Noble gentlemen did not involve themselves in farming, trades or professions. Instead, they invested much of their wealth in land.

There is no single event that marks the beginning of the Industrial Revolution in Britain, but the industries that first experienced it were connected with the production of iron, coal, cotton and wool.

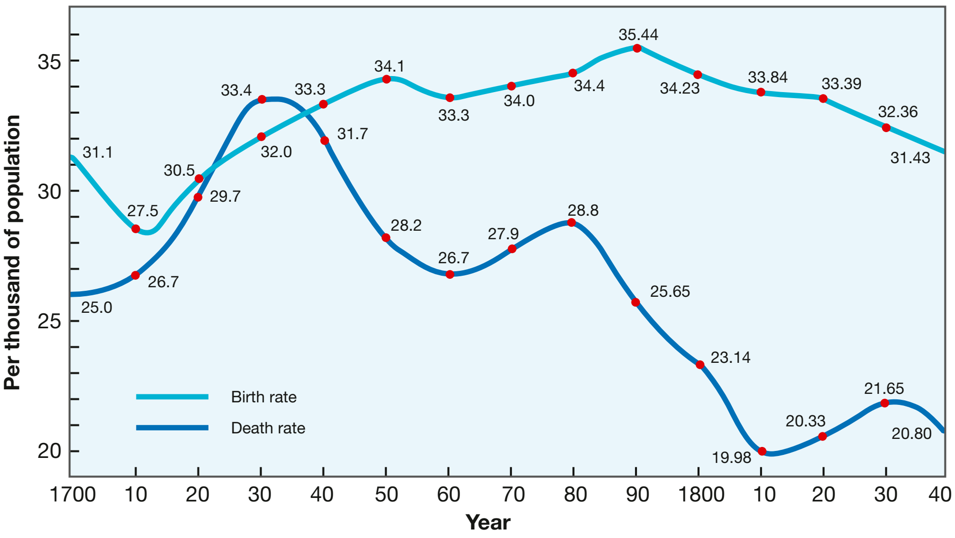
The Industrial Revolution begins

During the Industrial Revolution, Britain's population quadrupled from an estimated 6.5 million people in 1750 to around 32.5 million in 1900. This increase was mainly a result of improved living standards and declining death rates. The population of Britain moved from rural to urban communities, and Britain was transformed through the development of:

- *factories and textile mills* – the Industrial Revolution led to thousands of new factories and mills being built across Britain. These factories relied on large numbers of workers and machinery to manufacture massive quantities of goods in one place. The growth of factories and textile mills transformed Britain's economy and society.
- *modern towns and cities* – great industrial and commercial cities like London and Manchester grew as people moved to towns and cities to work at the new factories, mills and metal foundries. Before the Industrial Revolution, 80 per cent of the population lived in the countryside and only 20 per cent in cities. **Industrialisation** reversed this pattern. By 1850, 80 per cent of people in Britain were living in a major city or town and only 20 per cent remained on the land.
- *new sources of power* – the development of steam power and electricity transformed the manufacturing, agricultural transport and communications industries, having a major impact on people's everyday lives.

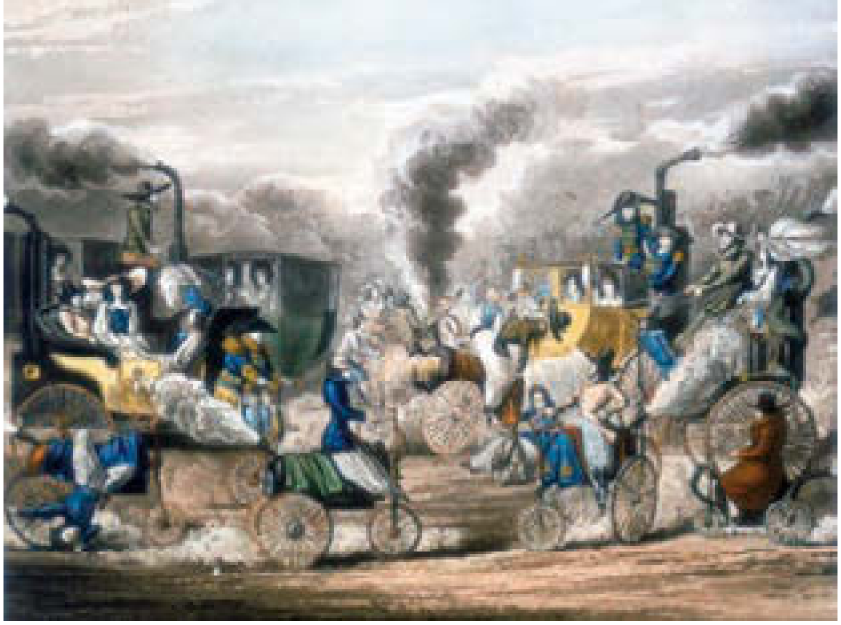
Supplies of coal became vital to fuel steam engines and, later, electrical power stations.

- *improved transport and communications* – as the population grew, towns became linked by new canals, roads and railway lines. New modes of transport were also invented to replace horse-drawn carriages (see Source 3). As travelling conditions improved, people travelled more and lived less isolated lives. Later, new communication technologies like telegraph and telephone systems were also introduced.



Source 2 Population change in Britain, 1700–1840

The growth of cities and industries also saw the emergence of a new social class that became known as the 'middle class'. This new group of people came from a broad range of backgrounds and were neither wealthy aristocratic landowners nor impoverished factory workers. Instead, they included wealthy industrialists and merchants, as well as bankers, shopkeepers, teachers, doctors, lawyers, and the increasing number of managers, clerks and government officials. People earning middle-class salaries could afford fine clothing, furniture, ceramics and other household items. It was this class of people that drove the demand for mass-produced consumer goods. They also drove the need for more schools, universities and libraries. The political power of the British middle class increased throughout the 1800s.



Source 3 This painting from 1831, *The Progress of Steam, A View in Regent Park 1831,* humorously shows suggested replacements for horse-drawn carriages.

Check your learning 8.2

Remember and understand

1 When and where did the Industrial Revolution begin?

2 List five key features of British society in the century before the Industrial Revolution began.

Apply and analyse

3 Write a paragraph explaining how life changed for British people between the mid-1700s and the late 1800s.

4 Using Source 2, describe the changes that took place in Britain from 1700 to 1840.

5 Before the Industrial Revolution, 80 per cent of people lived and worked on the land. How had this trend changed by 1850?

Evaluate and create

6 Historians still argue about why Britain became such a powerhouse of the Industrial Revolution, while other European countries were slower to modernise. The Netherlands and France were two other countries that might have had an Industrial Revolution first. Conduct some Internet research to identify some of the reasons why this didn't happen.

8.3 Why the Industrial Revolution began in Britain

One of the key factors that led to the start of the Industrial Revolution in Britain was its authority and wealth as an empire.

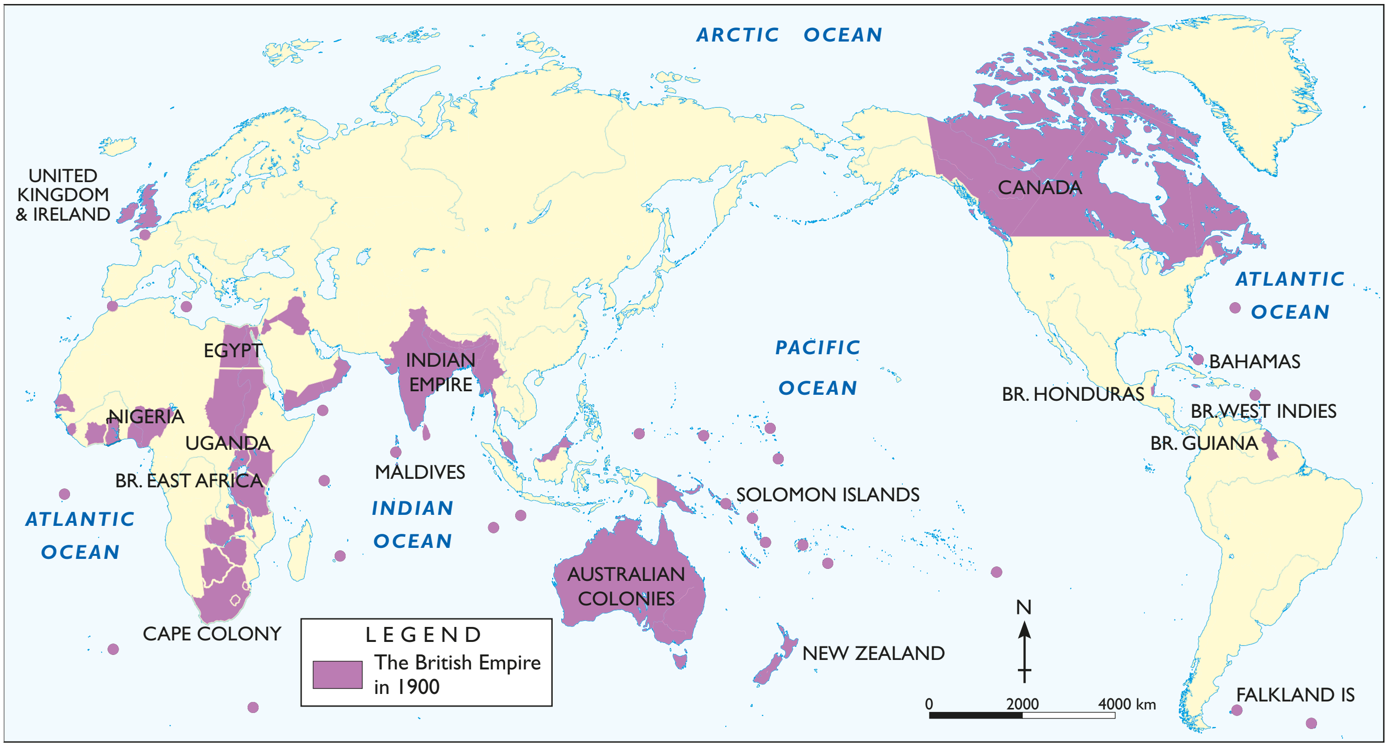
Rise of the British Empire

The expansion of the British Empire took place in two phases:

- The first phase was the establishment of the earliest British colonies in North America in the 1600s. Over the next 200 years, Britain, France, Spain, the Dutch and Portuguese all laid claims to new territories around the world, including the Americas, Asia, Africa and the Pacific.
- The second phase was linked to a series of wars fought between the European powers in the 18th century and early part of the 19th century. Britain's superior naval strength ensured that it succeeded in becoming the dominant imperial power, despite the loss of many of its American colonies in the **American War of Independence** in 1783.

By 1900, the British Empire had expanded to cover around a quarter of the Earth's surface and ruled over a quarter of the world's population (see Source 1). Many of Britain's colonies provided the raw materials, workforce (in the form of slaves) and customers needed to drive the Industrial Revolution. Britain controlled more colonies, and therefore had access to more raw materials than any other country, including sugar from Australia and the West Indies, wool from Australia and New Zealand, cotton and tea from India, rubber from Malaya, gold from Australia and South Africa, coffee from Jamaica and Africa, wheat from Australia and Canada, and timber from the vast pine forests of Canada.

WORLD: BRITISH EMPIRE 1900


ARCTIC OCEAN
UNITED KINGDOM & IRELAND
CANADA
ATLANTIC OCEAN
EGYPT
INDIAN EMPIRE
PACIFIC OCEAN
BAHAMAS
BR. HONDURAS
BR. WEST INDIES
NIGERIA
UGANDA
BR. GUIANA
BR. EAST AFRICA
MALDIVES
SOLOMON ISLANDS
ATLANTIC OCEAN
INDIAN OCEAN
AUSTRALIAN COLONIES
CAPE COLONY
LEGEND
The British Empire in 1900
NEW ZEALAND
N
0
2000
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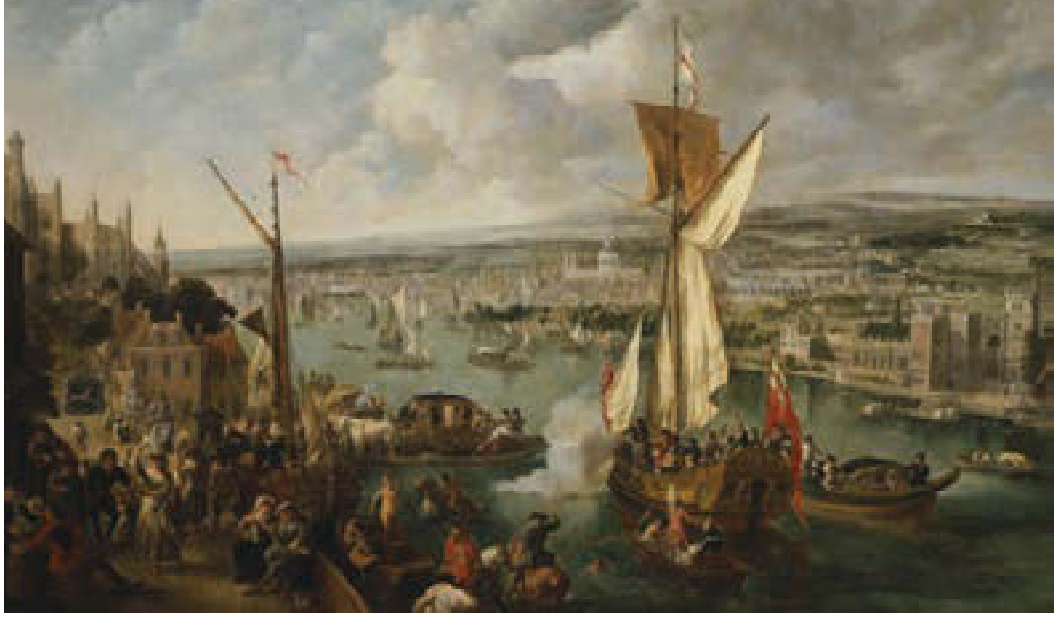
FALKLAND IS

Source 1

Source: Oxford University Press



Source 2 Britain relied heavily on a strong navy and experienced fleets of merchant trading ships.

Other factors

In addition to the power of the British Empire, historians have proposed a range of reasons why Britain was the first country to experience the Industrial Revolution and why it became the world's leading economic and industrial power for a time. The answer lies in a combination of factors related to Britain's history, geography and culture. Some of these are discussed briefly below:

- *Britain's coal supplies* – Britain was fortunate to have large supplies of coal, a vital fuel for the steam power that drove the Industrial Revolution. None of the other European powers had such large quantities of accessible coal.
- *naval power and trading power* – as an island nation, Britain had always relied on skilled sailors, a strong navy and experienced fleets of merchant ships. Its largest merchant trading company was the East India Company (EIC). At its peak, the EIC rivalled many smaller European powers in terms of wealth and influence.
- *individual freedom and the capitalist spirit* – unlike many of the other European powers, there was a greater measure of individual and intellectual freedom in Britain. These freedoms provided a fertile ground for those willing to try new methods and take risks. In other parts of Europe, government restrictions and less individual freedom limited opportunity.
- *stable government* – before the start of the Industrial Revolution, Britain had enjoyed a prolonged period without much political or social conflict, compared to many other countries in Europe. This sense of stability and order encouraged the growth of business.
- *superior banking system and capital for investment* – increased trade meant that financial services in England – such as banking, investment and insurance – expanded to support and protect that trade. Britain's banking sector was more advanced and modern than those of other European countries. There was a ready supply of capital (money) available at very low rates of interest. This meant that money was available to start up new businesses and pay for experiments to develop new inventions. Two of the key inventions of the Industrial Revolution, the steamship and the telegraph, were important in helping Britain administer their colonies around the world.

Check your learning 8.3

Remember and understand

1 List the main changes that took place across Britain between 1750 and 1850.

2 Why were large coal deposits in Britain so significant during the Industrial Revolution?

3 What was the name of the largest British merchant trading company?

4 List three colonies under British rule and the raw materials they provided to fuel the growth of industries in Britain during the Industrial Revolution?

Apply and analyse

5 What percentage of the Earth's surface was under British rule by 1900?

6 Use Source 1 and your own research online to answer the following: By 1900, 25 per cent of the world's total population was ruled by the British. How many people was this?

8.4 Developments in agriculture

From the mid-1600s, changes in farming and agriculture across Britain paved the way for the Industrial Revolution. Many historians believe that without these changes industrialisation would not have been possible from 1750 onwards. The changes that took place in agriculture were brought about by demands for more food to support Britain's growing population. Collectively, these changes are referred to as the Agricultural Revolution.

During the Agricultural Revolution, forests were cleared, grazing pastures were turned over to crop growing, and low-lying marshes were drained to grow even more crops. Small plots of farmland were consolidated into larger, more efficient fields under the enclosures. As a result, over 100 years Britain increased its farmlands by 30 per cent.

For the first time, agriculture became a business. Instead of just growing food to eat, farms began producing surplus amounts of food with the goal of selling it for profit. Landowners began investing more money in better livestock, fences and farming equipment. They also moved to growing high-yield crops such as wheat and barley. Improved farming techniques and equipment led to increases in crop production. For example, the amount of wheat produced in Britain increased by 75 per cent between 1700 and 1800.

The enclosures

More than 4000 Enclosure Acts (laws) were passed by the British Parliament during the Agricultural Revolution. These Acts transferred areas of common land that had previously been worked by small groups of local farmers into the hands of private landowners. These smaller areas of land were then joined together to create large farms that were enclosed by hedges or stone walls. This meant that local famers could no longer graze their animals or farm the land (see Source 1). Other land, which until then had been known as 'waste land', was also enclosed. By 1790, three-quarters of all farming land in Britain was enclosed by wealthy landlords. These landlords then rented this land to tenant farmers.

The process caused a great deal of social unrest as many poor people were forced off the land they had farmed free of charge for generations. Many flooded into the cities and became part of the new industrial working classes, while others sought new lives abroad.

Source 1 Stone walls like these were built to enclose what was once common land.

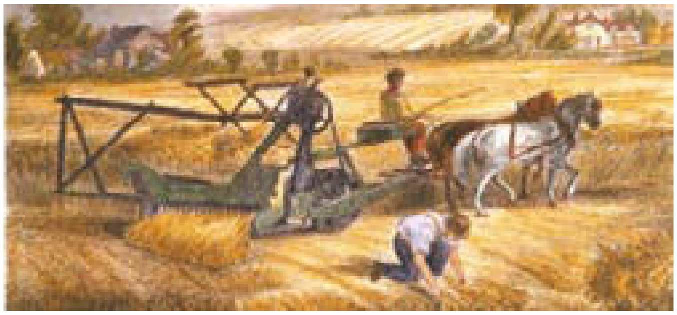
Crop rotation

Despite the hardship it caused for many poor farmers, the new commercial approach to farming led to improved management of the crops. For centuries, farmers had practised a process known as crop rotation, which involved leaving a field fallow (unused) for a period in order to avoid exhausting the soil. However, in 1730 a landowner by the name of Charles Townshend introduced a new method of crop rotation on his farm that became known as the 'four-field system'. He grew wheat in the first field, barley in the second, root vegetables (such as carrots and turnips) in the third and clover in the fourth. Each season, the crops were rotated (shifted around), which meant that no field was left fallow and the soil in each field was kept high in minerals and nutrients (like nitrogen). Wheat and barley were harvested for humans, while the fallow period was now replaced by clover, which could be used for grazing animals. The development of the four-field system earned Charles Townshend the nickname Turnip Townshend.

Improved farm machinery and methods

By the early to mid-1800s, new farming machinery was in use. There were new mechanical drills for planting seed, reaping machines for harvesting crops (see Source 2) and threshing machines to separate the valuable grain from the stalks of wheat and barley plants. These machines made farming more efficient and increased the profits that could be earned from the land. Each year, the amount of land that could be prepared, farmed and harvested in a season increased. By the 1840s, fertilisers were widely used, once again raising the productivity of the land.

Along with improvements in crop production came improvements in animal breeding and rearing. From the late 1700s onwards, the agriculturalist Robert Bakewell began selective breeding of livestock on his property. He developed a new breed of quick-fattening sheep with finer wool and tastier meat, called the New Leicester. Bakewell also bred cattle for beef production. His ideas produced stronger animals that were noted for their larger size and better quality.



Source 2 Cyrus McCormick's reaping machine of 1831 led to huge improvements in how grain was harvested.

key**concept:** Empathy

The effects of the enclosures

By applying the key concept of empathy, historians are able to understand the effects of the enclosures from the point of view of all those involved. While many wealthy landowners saw the enclosures as a way of increasing productivity and profits, many thousands of ordinary farmers in Britain saw them as the destruction of their way of life. The enclosures denied them access to the lands that had supported their families for centuries and in many cases their property was destroyed. Some landlords permitted their tenants to dismantle their houses and take the wood away to build elsewhere. Others simply burned the homes and property of their tenants.

Between 1775 and 1850, over 25 000 Scots were forced from their homes in the Highlands of Scotland by landowners wanting to enclose the land. This process became known as the 'Highland Clearances'. These farmers were left homeless and without the ability to grow their own food (see Source 3).

Source 3

> Their wretchedness was so great that [they] … were obliged to subsist upon broth made of nettles, thickened with a little oatmeal. Those who had cattle [resorted to] bleeding them and mixing the blood with oatmeal, which they afterwards cut into slices and fried.
>
> James Loch, *The Sutherland Improvements*, 1820

For more information on the key concept of empathy, refer to page 208 of 'The history toolkit'.

Check your learning 8.4

Remember and understand

1 What did the 'enclosure' of land mean?

2 Approximately how many Acts did the British Parliament pass that related to enclosure in the 1700s and 1800s?

3 What innovation led to Charles Townshend's nickname Turnip Townshend? Why was this innovation important?

4 What was Robert Bakewell known for?

Apply and analyse

5 Write a short paragraph explaining how new machinery affected the harvesting of crops.

Evaluate and create

6 The Enclosure Acts resulted in improvements in the farming industry, but it also led to a number of social problems for farmers who had previously had free access to land. With a partner, write and role play a conversation between a landowner who has benefited from the Enclosure Acts and a farmer who has lost both land and income as a result of the Enclosure Acts. In this conversation, ensure each person describes and explains the effect the Enclosure Acts have had on their lives and livelihood.

8.5 Developments in cotton, wool and iron production

Some of the most important developments and innovations of the Industrial Revolution took place in the production of cotton, wool, coal and iron. However, arguably the most important 'invention' of the Industrial Revolution was not a single item of equipment or technology at all. Instead, it was a way of producing goods on a large scale using many workers and specialised machinery on one site. This method of production became known as the **factory system**.

The factory system

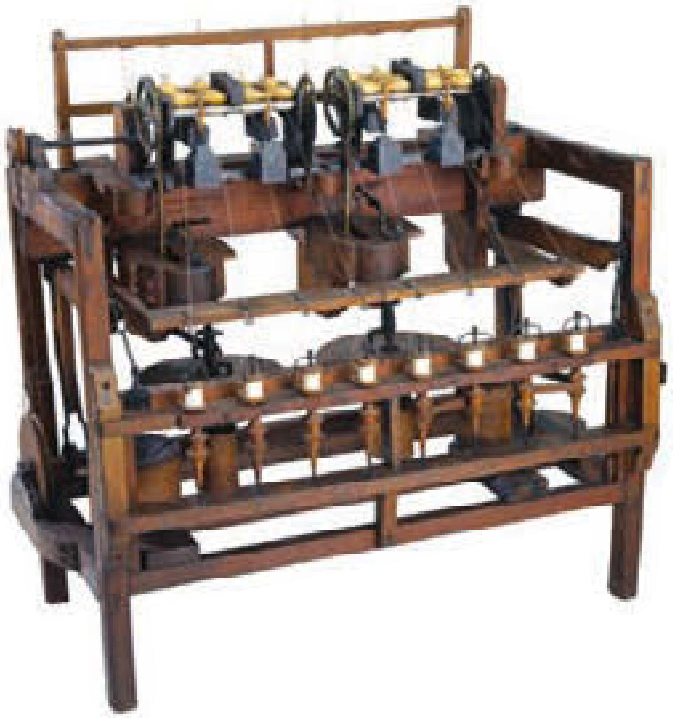
Before the introduction of the factory system, manufacturing often took place in small workshops or in local workers' cottages (hence the term 'cottage industries'). Local trades and crafts people such as blacksmiths, wheelwrights (wheel makers), cartwrights (cart makers), potters, millers and weavers used their skills, muscle power or water power to largely hand-make items. In contrast, the factory system brought together large numbers of workers in a single site or factory. Few of these workers were skilled because most of the manufacturing was done by machines. Instead, the many workers performed tasks that were repetitive and required little skill. The machines were powered at first by water with waterwheels, then by steam and next by electricity. The factory system itself was made possible by a combination of the technological innovations and knowledge that emerged during this period.

Cotton and wool production

The first factories of the Industrial Revolution were cotton mills. Inventions such as the flying shuttle, spinning jenny, water frame (Source 1) and Crompton's mule (Source 2) in Britain paved the way for the mass production of cotton and wool.

The flying shuttle

The flying shuttle, invented by John Kay in 1733, introduced a more efficient way of weaving on hand-looms. It only required one weaver to shoot the yarn from one side of the width of the loom to the other. This was especially useful for very wide looms. Weavers could produce cloth much more quickly, increasing the demand for spun yarn.



Source 1 Arkwright's water frame

The spinning jenny

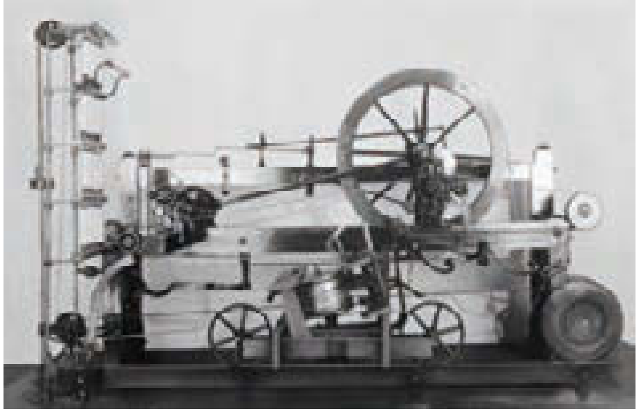
The spinning jenny, a machine invented by James Hargreaves in 1765, helped increase the supply of yarn. It could spin eight threads at once, whereas the traditional spinning wheel could only spin one thread at a time.

The water frame

The water frame, invented by Richard Arkwright in 1768, was a spinning frame that improved on James Hargreaves' invention, as it could be powered by a waterwheel and produce yarns of any type.

Crompton's mule

Crompton's mule was invented in 1779 by Samuel Crompton by combining the spinning jenny's carriage and the water frame's rollers. It allowed a single power



Source 2 Crompton's mule

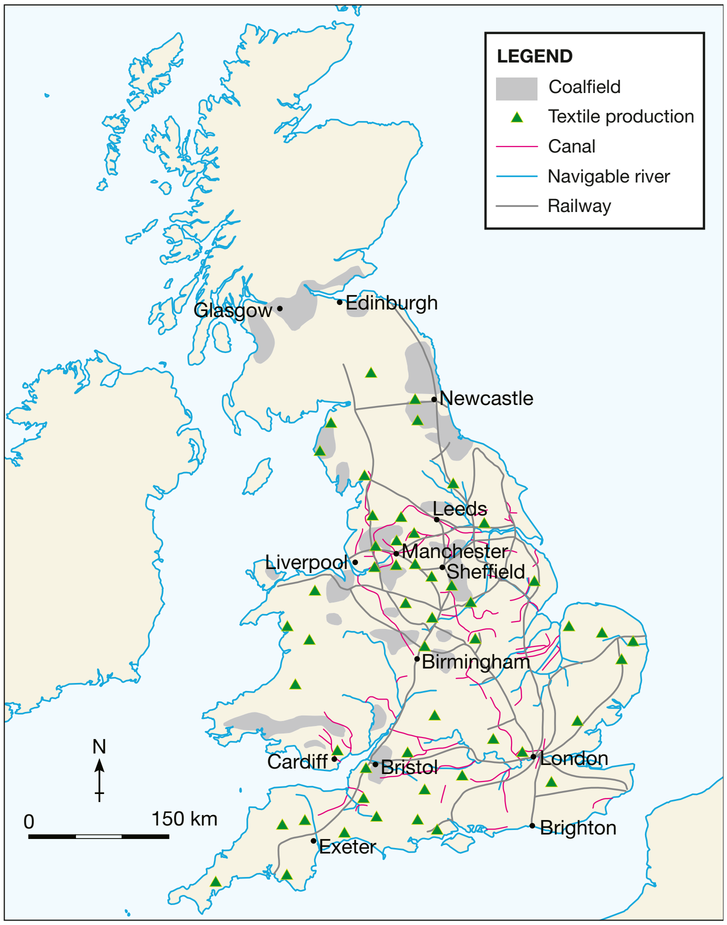
source to spin multiple machines, and worked with wool or cotton yarns. However, it still required a skilled weaver to operate. These spinning mules were developed further so they could be operated by unskilled workers. Steam power was later applied to the spinning mules for use in cotton-spinning factories.

By the middle of the 1760s, Britain had become the centre of cotton production, importing raw cotton from India and the United States. The raw cotton went to the mills where machines were used to spin the raw cotton into yarn, and then weave the yarn into cloth. The very first mills were powered by waterwheels, so they needed to be located close to strong-flowing rivers and streams. After the development of steam power, mill owners were able to build mills in cities – closer to a constant supply of workers and potential customers.

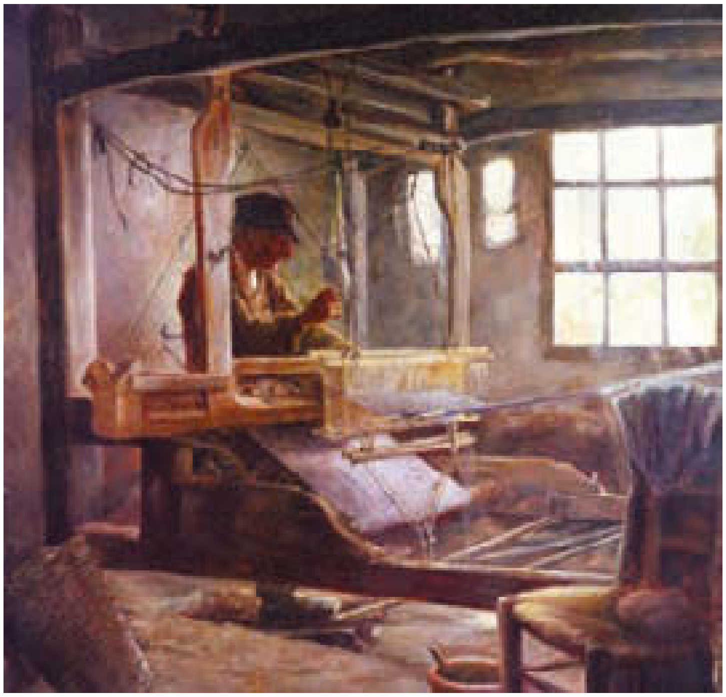
As a result of these developments, over time the skills of traditional weavers (see Source 4) were no longer needed. Weavers were replaced by workers who were only required to feed the raw cotton or cotton yarn into machines. Many mill owners, keen for increased profits, wanted their machines running all of the time. This meant long working hours – up to 16-hour working days – and shift work for labourers. Because mill workers did not need to be skilled, women and young children became part of the workforce as they were cheaper to employ.

Overall, conditions for workers during the first decades of the Industrial Revolution were poor. Brutally long hours for low pay, in badly lit and uncomfortable conditions became commonplace. Although harsh working conditions for the men, women and children working in factories and mines were common, there were also exceptions. For example, at the cotton mills operated by Robert Owen in New Lanark in Scotland, the children of workers were well cared for and educated.

BRITAIN: TEXTILE PRODUCTION AND COALFIELDS, EARLY 19TH CENTURY



Source 3 Source: Oxford University Press



Source 4 Weavers originally worked from their homes, using their own looms, rather than in factories.

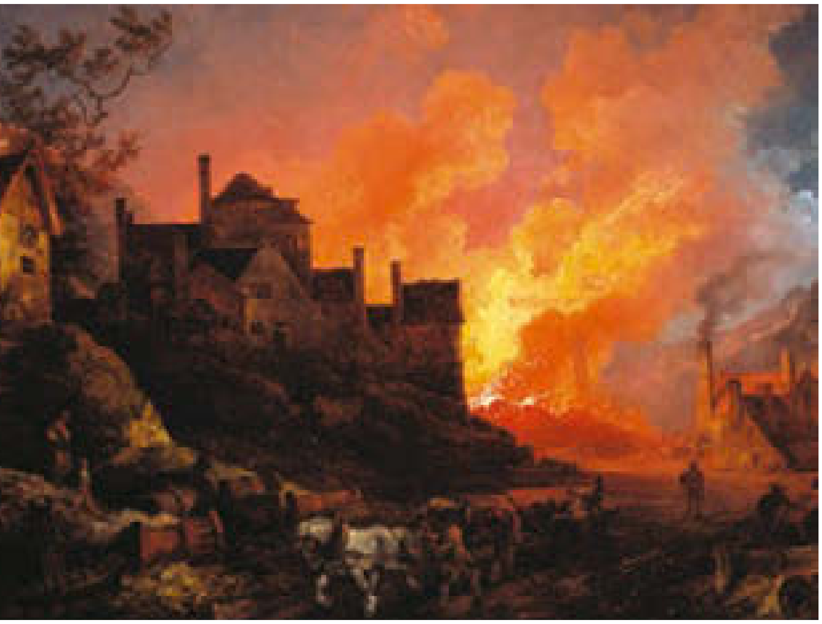
Iron production

Before the Industrial Revolution, iron producers had to heat (smelt) the iron ore (rock) to extract the raw metal or 'pig iron' from it. Generating the necessary heat to smelt the iron ore required charcoal, but making charcoal was time-consuming and demanded large quantities of wood. Because of this, wood supplies across Britain were dwindling. In 1709, Abraham Darby, an iron producer at Coalbrookdale in Derbyshire, England (see Source 5), found a way to bake coal to make a substance known as coke. Coke was a new, smokeless fuel that burned much hotter than ordinary coal. Quickly, coke replaced charcoal as the fuel used to smelt iron ore. Iron foundries were established near coalfields (rather than forests), and the iron and coal industries became strongly linked.

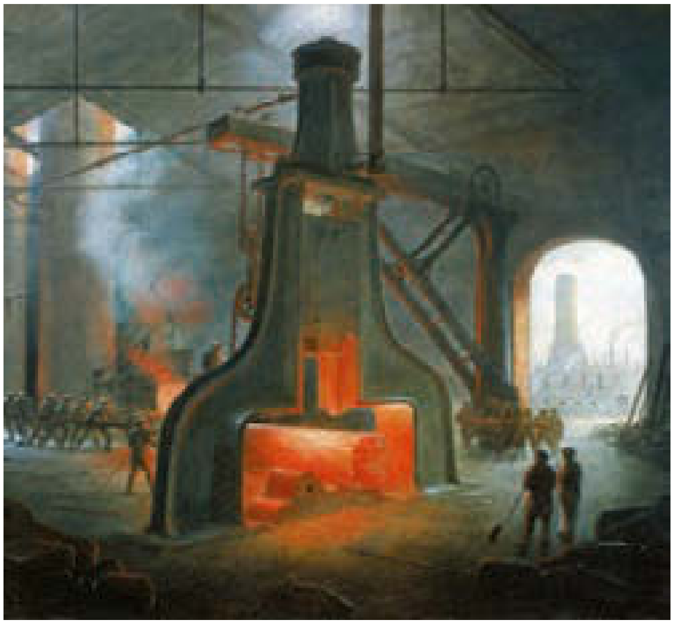
Other innovations also made the smelting process more efficient. In 1784, iron producer Henry Cort was able to combine two processes, known as '**puddling**' and 'rolling', which made the large-scale production of pig iron possible. The amount of pig iron smelted in Britain rose from 25 000 tonnes in 1728 to 60 000 tonnes in 1788. By 1796, Britain was producing 125 000 tonnes.

As production increased, new uses were found for iron. Iron utensils such as knives and forks became common, as did iron pots and pans for household kitchens. Iron was also used as a building material in factories and houses, transforming the design of buildings. For example, in 1851, London's Crystal Palace had a roof and walls made of iron frames and giant panes of glass. By this time, British pig-iron production was 2.25 million tonnes, 18 times as much as in 1796. Similarly, the French put iron to use in 1889 building Gustave Eiffel's famous tower (see Source 6). The Eiffel Tower is an iron lattice structure created as the centrepiece of the 1889 World's Fair in Paris. It is 324 metres tall – as high as an 81-storey building – and remained the tallest structure in the world until 1930.

Source 6 The Eiffel Tower under construction, 1889



Source 5 Coalbrookdale ironworks operating at night, 1801

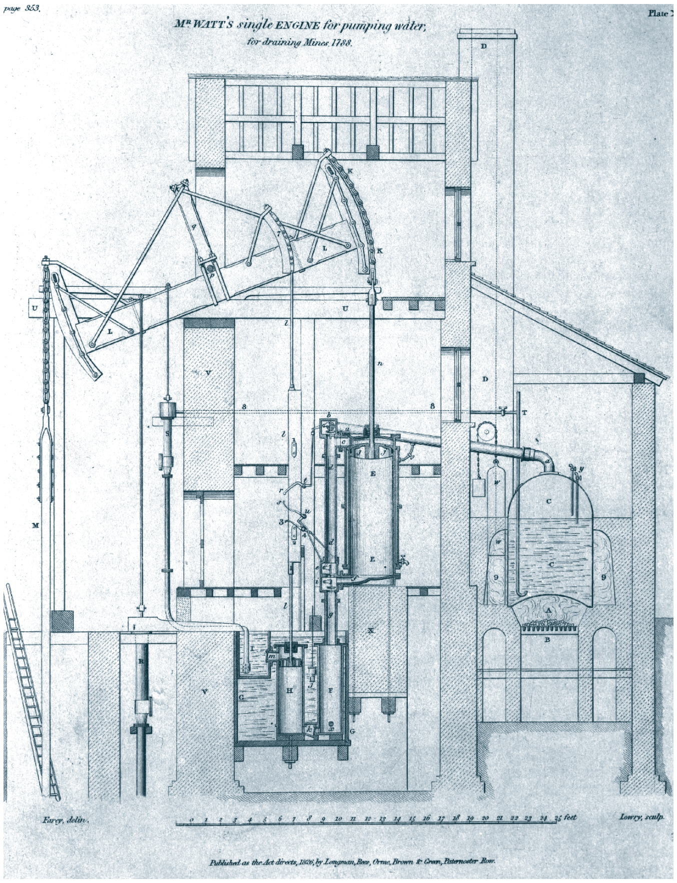


Source 7 Foundry workers using a large steam hammer to shape red-hot iron, Manchester, England, 1832

The development of the steam engine

The invention of the steam engine revolutionised manufacturing and transport, and was later used to generate electricity. Coal supplies were vital to fuel the Industrial Revolution, and the ever-increasing demand for coal led to the opening of new mines and the deepening of older mines. The digging of deeper mines in turn required better pumping systems to keep water from flooding lower levels. Two inventors, Thomas Savery (around 1698) and Thomas Newcomen (around 1710) developed early steam engines to pump water from mines.

While repairing a Newcomen steam engine, engineer James Watt realised that he could greatly increase its efficiency. Watt did not invent the steam engine but in 1769, he developed an improved version that was more practical and powerful. In 1775, Watt formed a partnership with Matthew Boulton to manufacture the new steam engines (see Source 8). Over the next 25 years, their firm manufactured almost 500 steam engines. They were used not only in the mining industry, but also in cotton-spinning factories, flour mills, breweries and sugar cane crushing mills around the country.


page 353.
Plate
Mr. WATT'S single ENGINE for pumping water, for draining Mines. 1788.
Farey, delin.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 feet
Lowry, sculp.
Published as the Act directs, 1826, by Longman, Rees, Orme, Brown & Green, Paternoster Row.

Source 8 James Watt's steam engine for pumping water from mines

Check your learning 8.5

Remember and understand

1 What were some of the problems with using charcoal in the process of extracting iron from iron ore?

2 What is coke, and what difference did it make to the iron-making process?

3 Name some of the new uses and products that developed from the availability of mass-produced iron.

4 What was one of the major reasons for the increase in demand for coal during the 1700s?

5 List three effects of the increased demand for coal during the 1700s and early 1800s.

6 Why was the cotton industry regarded as a 'cottage industry' prior to the Industrial Revolution?

Apply and analyse

7 Explain why the iron production and coal-mining industries became so closely linked during the Industrial Revolution.

8 Why was James Watt's invention so important at this time in history?

9 In your opinion, which of the four inventions discussed was the most important for the textile industry in Britain? Justify your response.

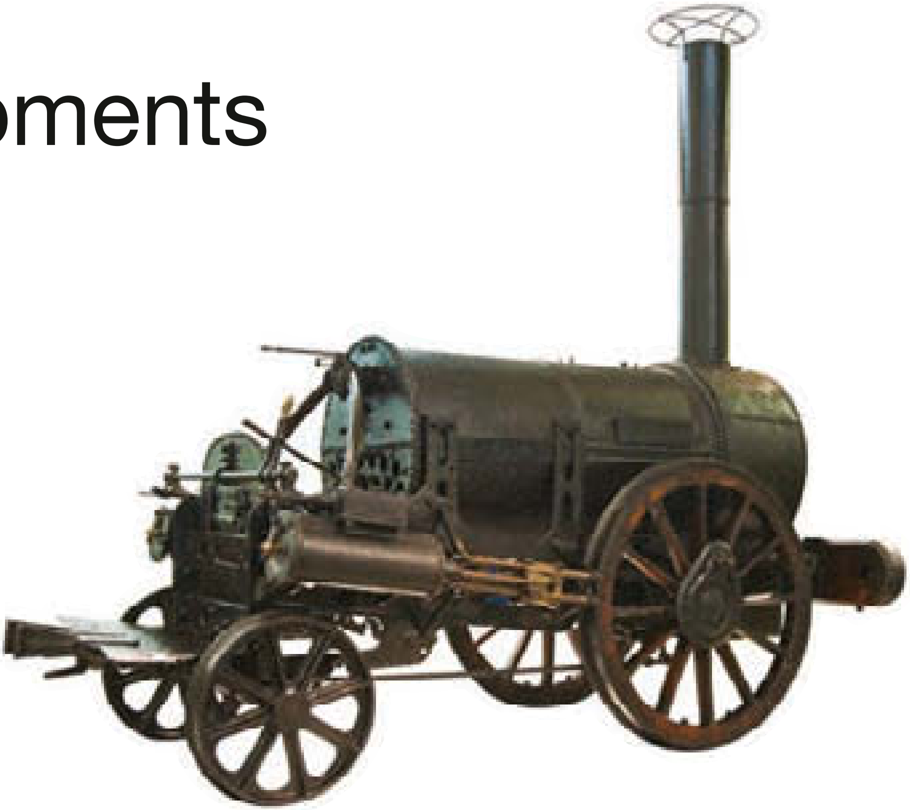
Evaluate and create

10 Create a poster that shows how new inventions transformed the textile industry during the Industrial Revolution. Make sure you include labelled diagrams or illustrations.

11 Imagine you are an 80-year-old weaver in the late 1700s. Write a short account of how your life and work practices have changed over your lifetime because of new inventions in the textile industry.

8.6 Developments in transport

At the start of the Industrial Revolution, transport in Britain was slow and costly, regardless of whether people travelled by road, river or sea. From 1750 onwards, growing numbers of wealthy merchants and **industrialists** started demanding quicker and cheaper forms of transport to move coal to their factories, ship their products to markets and speed up travel between cities. As a result, a number of new inventions and improvements were made in the area of transport.



Source 1 The original Stephenson's 'Rocket' locomotive, from 1829, now housed at the Science Museum in London

New inventions

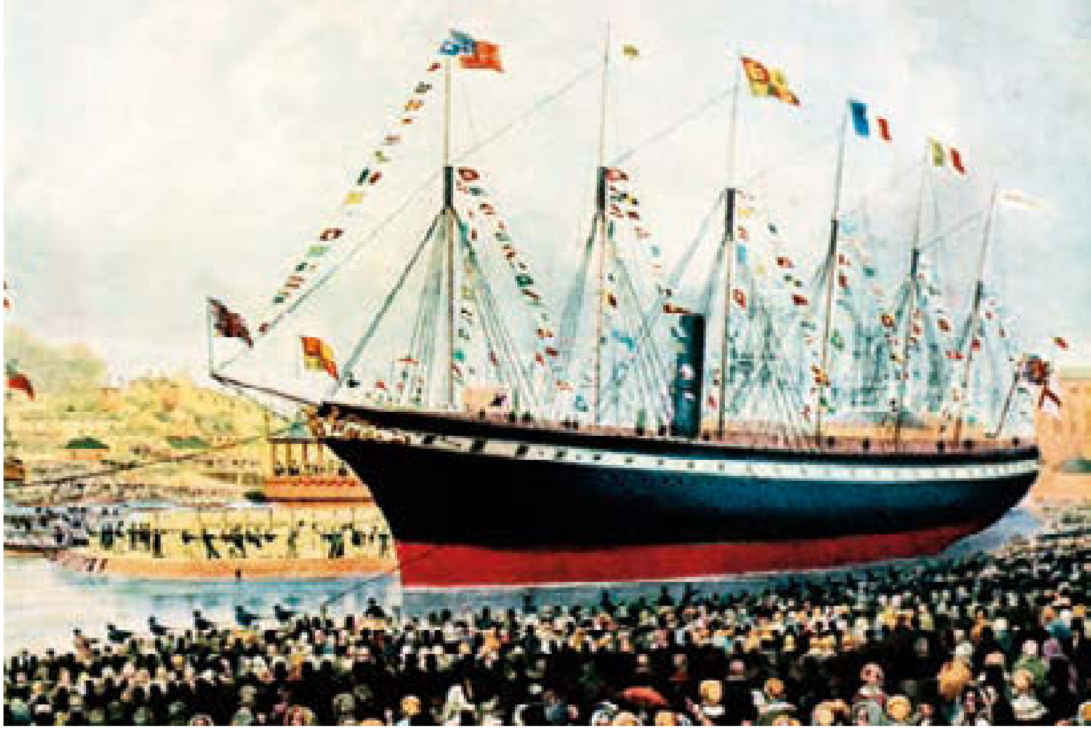
Steam locomotives

The first steam locomotive was built by English engineer Richard Trevithick in 1801. Unlike modern locomotives, it was driven on roads rather than rails. In 1804, Trevithick was the first person to drive a steam locomotive on the rails of a tramway.

The first locomotive built and used for commercial purposes was known as the Stephenson's Rocket. It was invented by George Stephenson (see Source 1) in 1829 and remains one of the most famous steam locomotives. From this point on, the designs of steam locomotives became more sophisticated. They also became far more powerful and capable of reaching greater speeds.

Steamships

The first commercial steamship was developed by an American named Robert Fulton in 1807. Like the steam locomotive, the steamship went through many different designs and improvements over the next 100 years. For example, the more resilient screw propellers were



Source 2 The launch of SS *Great Britain* in Bristol in 1843

developed to replace the easily damaged paddle wheels of the early steam ships. By 1838, ships were crossing the Atlantic Ocean driven purely by steam power. In 1843, the great British engineer Isambard Kingdom Brunel (see the Significant Individual section on pages 260–261) launched the SS *Great Britain*, the first iron-hulled steamship with a screw propeller designed to cross oceans. Steamships quickly began to replace sailing ships as the preferred means of ocean-going transport. Although their cargo space was reduced by the large amount of space required for storing coal, they were faster and more reliable.

The internal combustion engine

While the steam engine was useful for factories, trains and ships, it was too large to use in smaller businesses and smaller vehicles. In 1859, Belgian engineer Etienne Lenoir developed an engine that sucked coal gas and air into a cylinder, where it was ignited by a spark, pushing down a metal piston that turned a wheel. This invention became the basis for the internal combustion engine – the same engine that is used in all modern cars and engines.

German engineers Gottlieb Daimler and Wilhelm Maybach experimented with an engine that used a new fuel, which later became known as gasoline or petrol. Daimler first used it in 1885 to power a wooden bike called the Daimler Reitwagen (see Source 3). A year later, another German designer and engineer named Karl Benz patented the world's first petrol-powered car known as the Benz Patent-Motorwagen (see Source 4).

As internal combustion engines became more reliable and powerful, cars became more and more common. At first, private cars were painstakingly built by hand. Their high cost meant they became the toys of the very rich. It was not until 1908 that Henry Ford made the dream of owning a car possible for the common people. He did this by adapting the factory system to create an affordable car known as the Ford Model T. By using an **assembly-line** technique with a sequence of specialised workers who repeated the same task on a series of components, he was able to produce cars much more cheaply and quickly.

The internal combustion engine also allowed for the development of an engine that would be light yet strong enough to power flying machines. American brothers Wilbur and Orville Wright used a petrol engine connected to two propellers fitted onto a wooden glider to fly for 59 seconds in 1903. Powered flight was to develop rapidly, triggered by World War I.

Source 3 The world's first motorcycle built by Gottlieb Daimler, 1855

Source 4 The first Benz motorcar, 1886

Other transport improvements and innovations

As new modes of transport became available, demand for new and improved roads, bridges, canals, and railway lines grew rapidly.

Improved roads and bridges

In the early 1700s, most roads in Britain were built and maintained by local inhabitants who carried out repairs only when absolutely necessary. This meant that most roads outside London were in very poor condition. A few roads were managed by turnpike trusts – agencies that collected fees from travellers in return for keeping the roads in good condition (see Source 7). By the early 1800s, pressure from industrialists such as Josiah Wedgwood (ceramics), John Wilkinson (iron) and Matthew Boulton (coin minting) led to a dramatic increase in the number of turnpike trusts. By the 1830s there were more than 1000 such trusts. As a result, roads improved and travel times decreased.

As roads improved, demand for more reliable and convenient ways of crossing rivers grew. In 1779, Abraham Darby began building the world's first cast-iron bridge to link a small mining town with nearby factories in the town of Coalbrookdale. A toll was charged for using the bridge which became known as the Iron Bridge (see Source 5). The bridge became famous in 1795 when it remained standing after a major flood. After that, many more bridges were built using iron rather than stone.

Railways

The world's first railway line was built in 1825 between the coalfields in Darlington and the seaport of Stockton in north-east England. It combined two innovations – the steam engine (formerly used to pump water from mines) and rail-mounted mining trucks (formerly pulled by horses).

Railways added a whole new phase to the Industrial Revolution. In 1830, a new track linking the Manchester cotton industry to the port of Liverpool opened to transport goods for export. This was the first railway to link two major cities. Throughout the 1830s and 1840s, the building of rail tracks and strong, iron bridges for new train routes meant that iron production doubled at this time.

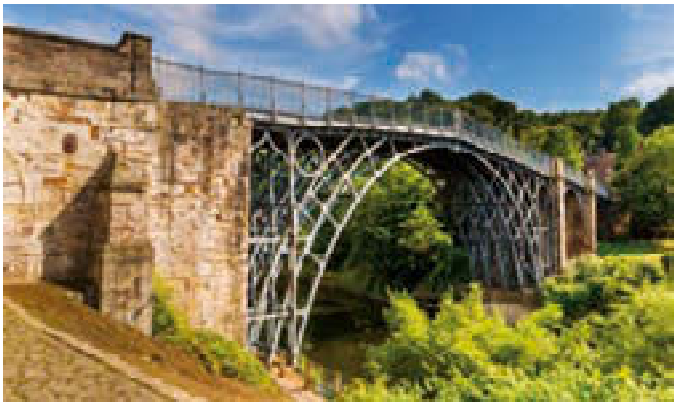
Development of railways in Britain grew rapidly, with permission for the construction of 438 new lines granted by parliament between 1844 and 1846. More workers were needed in the iron factories to meet railway orders, and another 200000 men were employed, just for laying railway tracks. By 1848, over 40 million train journeys were made in Britain.

Before the Industrial Revolution, the journey from London to Edinburgh – just over 640 kilometres – took between 10 and 12 days by horse-drawn coach. By 1836, the travel time had dropped to just under two days by train. By 1850 – when all of Britain was linked by rail – this had dropped to around 12 hours (see Source 6).

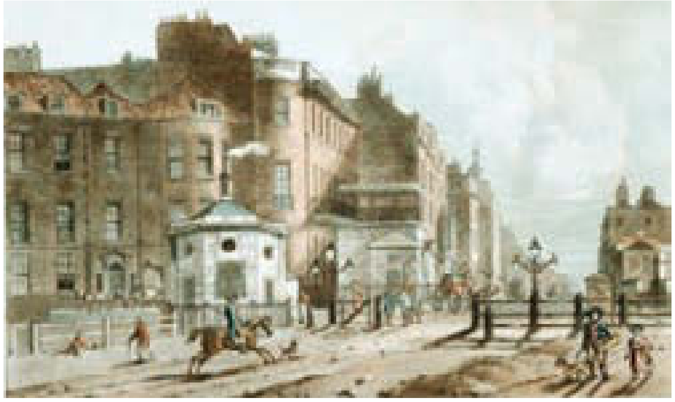
Travel for holidays became more common and some commodities became more readily available. These included fresh flowers and milk, delivered to London on early morning 'milk trains' from Cornwall and Devon in the south-west.

Source 6 Changes in travel times (in hours) between London and other key cities, 1836 and 1850

CITY	1836	1850
Edinburgh	43	12.5
Liverpool	24	6.6
Exeter	18	4.75
Birmingham	11	3
Brighton	6	1.25



Source 5 This bridge in the town of Ironbridge, England, designed by Thomas Pritchard and built by Abraham Darby in 1779, is the world's first iron structure.



Source 7 An artist's impression of Tyburn Turnpike in London in 1813 showing the toll house and a toll being collected from a horseman passing through the gate

Source 8 The Forth Railway Bridge in east Scotland under construction. By the time of its completion in 1890, it was the longest bridge of its kind.

Just like roads, these new railway lines required strong, reliable bridges that could carry locomotives and their cargo across wide rivers and gorges. The designs of iron bridges – already being used to carry cars and other small vehicles – were modified so they would be strong enough to carry much larger, heavier loads over larger distances (see Source 8). The surge in demand for these types of railway bridges in turn led to increased demand for iron production.

Canals

Over 100 canals were dug across Britain from 1760 to 1820, linking the major rivers and creating a transport network for the transportation of food and freight. One of the longest canals was the Liverpool to Leeds canal at 204 kilometres long. Work on it was begun in 1770 and finished in 1816.

Source 9 Canals, such as this one in Leeds, played an important role linking mills with the sources of their raw materials.

Initially, barges pulled by horses walking beside canals transported crops from the country the city and manufactured goods from the city back to the country. The canals were also used to move coal and other heavy goods, replacing the slower method of coastal shipping. As the high price of coal was mainly due to the costs of moving it (rather than mining it), new canals caused the price of coal to drop by half. The new lower price fed even faster growth in cotton mills. Cheaper coal transport also dropped the price of cotton weaving, increasing the profits for mill owners.

Check your learning 8.6

Remember and understand

1 How did developments in the use of canals lead to a drop in coal prices?

2 Use the information provided to answer the following:
   a How were roads maintained in Britain before the Industrial Revolution?
   b What led to better upkeep of roads during the early 1800s?
   c Where and when was the world's first railway line built?

3 What commodities became more easily available as a result of improvements to the railway network in Britain?

4 How were ships powered prior to steam power?

Apply and analyse

5 What evidence is there in Source 2 to suggest that the launch of the SS *Great Britain* was a significant historical event? In groups, construct a list of modern events that you believe to be equally significant. Discuss your lists as a class and decide which characteristics or impacts of both events make them significant.

6 Why was steam power regarded as 'more reliable' than earlier forms of transport? What role did it play in furthering the Industrial Revolution?

Evaluate and create

7 Conduct some additional online research in order to design a poster advertising the advantages and benefits of one of the following inventions:
   - the Stephenson's Rocket
   - the Daimler Reitwagen
   - Benz Patent-Motorwagen.

8.7 Significant individual: Isambard Kingdom Brunel

Isambard Kingdom Brunel was a British engineer, builder and inventor who lived during the Industrial Revolution. During his lifetime, Brunel worked on the first-ever tunnel under the River Thames; engineered the Great Western Railway, along with all its bridges and tunnels; and designed the world's first iron-hulled, steam-powered and propeller-driven ship. For these reasons he is often described as one of the most significant individuals in British history.

Early life

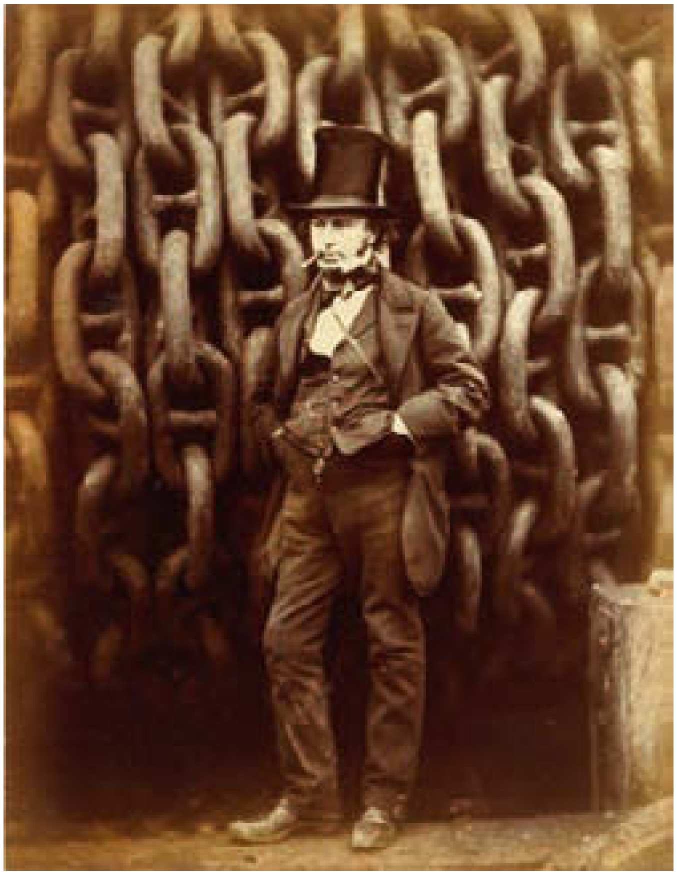
Brunel was born in 1806 in the town of Portsmouth in south-east England. His father was a French civil engineer who taught him technical drawing and observational techniques from the age of four. When Brunel was 15, his father was sent to prison for failing to pay debts of more than £5000. After three months, however, the British government ended up paying off his debts to keep him from offering his engineering skills to the Russians.

Although Brunel received a traditional education, his main hobby was building model boats. After completing an apprenticeship as a clockmaker in France, Brunel returned to Britain, where he worked with his father on a ground-breaking engineering project – the Thames Tunnel – a railway line under the river. This project was plagued by accidents and challenging engineering problems, but eventually resulted in success. It also provided many opportunities for Brunel to develop his skills.

Bridges and railways

Although there was strong competition from other engineers, the young Brunel's plans for the Clifton Suspension Bridge (see Source 3) in south-west England beat all other contenders. Brunel replaced old-fashioned designs with a modern look. He believed that innovation and experimentation were important and would be welcome: 'I am opposed to the laying down of rules or conditions to be observed in the construction of bridges lest the progress of improvement tomorrow might be embarrassed or shackled by recording or registering as law the prejudices or errors of today.'

At the age of 27, Brunel was appointed the chief engineer for the Great Western Railway, whose tracks eventually stretched 230 kilometres from London to Exeter. Brunel surveyed the route himself in order to ensure the trains would have the smoothest passage. He also designed numerous iron bridges to carry the trains, as well as massive iron-supported train sheds and buildings, such as the vast Paddington station in London. Brunel was personally involved in the design of the railway itself, claiming that the 'standard gauge' was a relic from the days when rails were only used for mining carts, and that better speeds could be obtained by using wider rails.



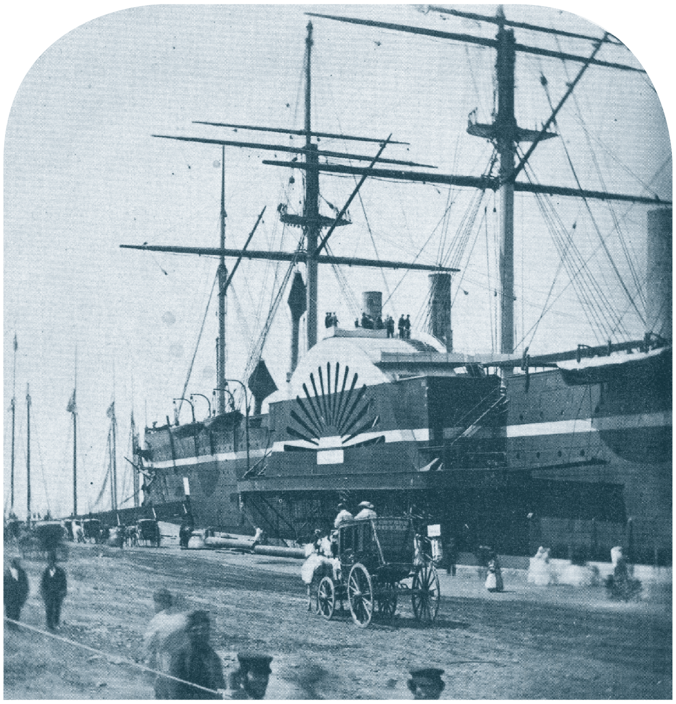
Source 1 Isambard Kingdom Brunel, in front of the launching chains of the SS *Great Eastern*, *c.* 1850

A new kind of ship

Before the Great Western Railway was complete, Brunel announced that he had a vision of an even greater project – the construction of a steam-powered ship that would allow passengers to continue their journey all the way from the English coast to New York. In 1838, his paddle steamer the SS *Great Western*, made of wood but reinforced with iron, crossed the Atlantic in 15 days. By 1843, Brunel's ship the SS *Great Britain* was the first truly 'modern' ship, built entirely of iron, and with a six-bladed screw propeller instead of a paddle wheel. Late in his life, Brunel began work on the SS *Great Eastern* (see Source 2), the largest steamship built before the 20th century. It was designed for the long return journey to India and Australia without refuelling, as it was believed at this time that there was no coal in Australia.

Brunel's legacy

Brunel hoped to retire to Brunel Manor, a house and garden that he had designed himself to enjoy in his old age. However, he died from a stroke in 1859, and did not live to see it finished. Brunel is remembered as one of the pioneers of the Industrial Revolution, although history largely remembers his successes, not his failures. Many Victorian critics hated his noisy trains, and thought his bridges were eyesores. His proposed 'broad gauge' rail size, although more efficient and comfortable for passengers, was eventually phased out because it did not match other lines in the country. He was nearly killed during the construction of the Thames Tunnel and, although the SS *Great Eastern* was the largest ship ever built at the time, it ran over budget and struggled to make a profit once launched. Also Brunel did not live to see some of his most famous monuments. Neither the Clifton Suspension Bridge nor the SS *Great Eastern* were completed until after his death.



Source 2 The SS *Great Eastern* steamship, designed by Isambard Kingdom Brunel

Source 3 Clifton Suspension Bridge, as it stands today in Bristol

Despite this, Brunel's achievements were so long-lasting that many of them are still in use today. The Thames Tunnel is part of the London railway network, and dozens of Brunel's British bridges are not only still standing, but also carrying modern trains and traffic.

Check your learning 8.7

Remember and understand

1 What did Brunel train as before taking a job with his father's firm?

2 Why did the British government bail Brunel's father out of prison?

3 What two design innovations set the SS *Great Britain* apart from earlier ships?

4 Which of his creations have stood the test of time?

Apply and analyse

5 Conduct some research to discover why Brunel's first steamship was called the SS *Great Western*.

6 What evidence is there to suggest that things did *not* always go Brunel's way?

Evaluate and create

7 Isambard Kingdom Brunel was a brilliant engineer who designed and built ships, bridges and tunnels. Conduct some research to find out more about Brunel and create a PowerPoint (or other kind of visual display with words and images) presentation to inform others about his work and influence.

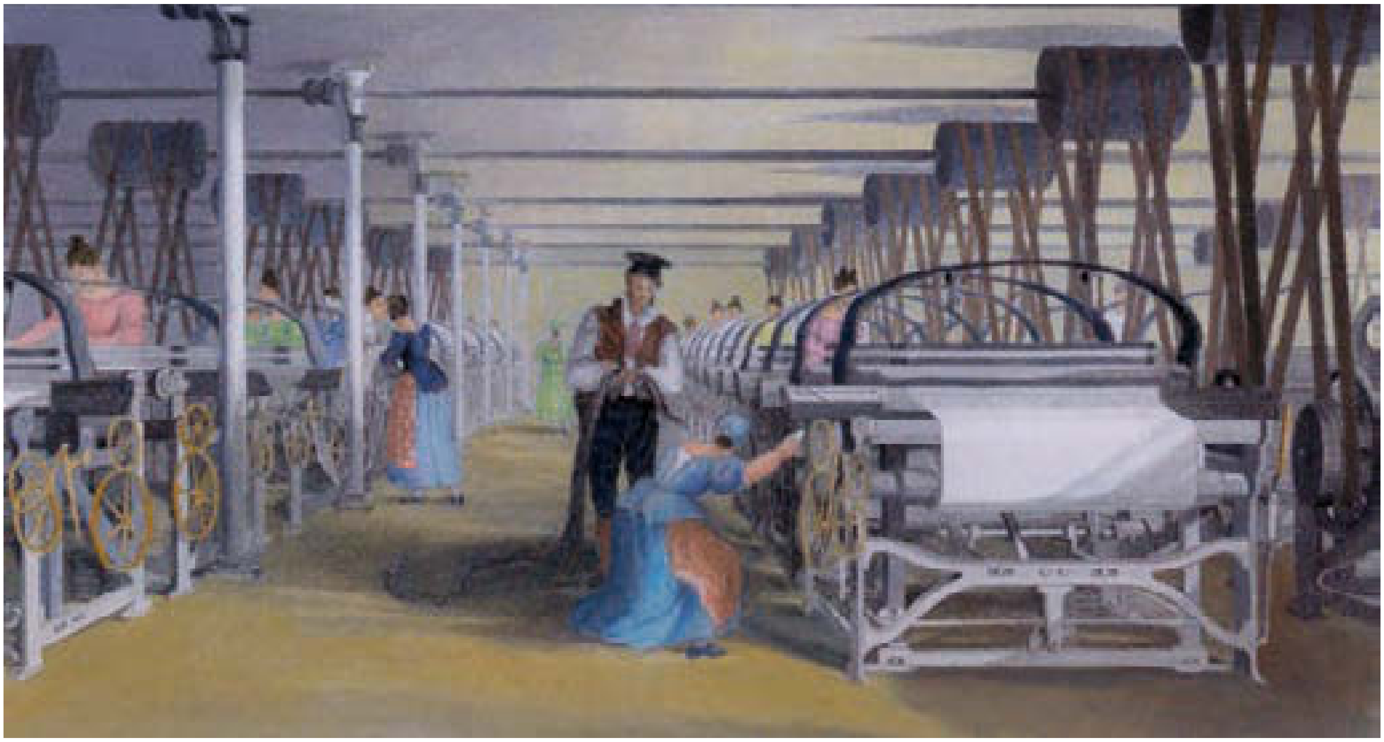
8.8 Expansion of factories and mass production

Progress and developments from the 1850s brought about advances in engineering and machine tools. Machinery both shortened the time required to make a product and reduced the number of people that were necessary for its production. Workers were needed to look after the machines, but they did not need to be skilled. Instead, production became focussed on producing large volumes of machine-made goods at far lower prices – a system known as mass production.

Cotton became Britain's chief export, replacing wool. British cotton goods accounted for 5 per cent of all national income. People such as Richard Arkwright, the inventor of the water frame in 1768, had predicted that production would become centralised, with all workers in the process being housed in one location. Many production centres turned into factory towns, with housing for the workers located close to the mill. Manchester was one of the largest, with a population that grew from 25 000 to 300 000 between 1777 and 1851.

There were some obvious benefits. The overall standard of living improved, and salaries increased from £25 in 1750 to £44 in 1860. However, the new production methods also created new problems, leaving many skilled cottage workers jobless, and encouraging a factory system that only valued large-scale production at low cost. Furthermore, the role of the worker became closely linked to ensuring that the machinery produced a certain quantity of goods or material rather than ensuring it was of a certain quality. Employment was offered to women and children because they could be paid less. Factories became notorious for poor safety conditions and harsh working environments. Until parliamentary reform began to regulate these working conditions, workers had to endure long hours and mindless repetitive tasks, unsanitary work areas, and conditions in which they either froze or roasted depending on the season of the year.

Portrayals of the period often show the workers as if they themselves were machines or part of machines churning out their products in gloomy, smoke-ridden environments.



Source 1 An illustration of power-loom weaving in a textile factory, 1834

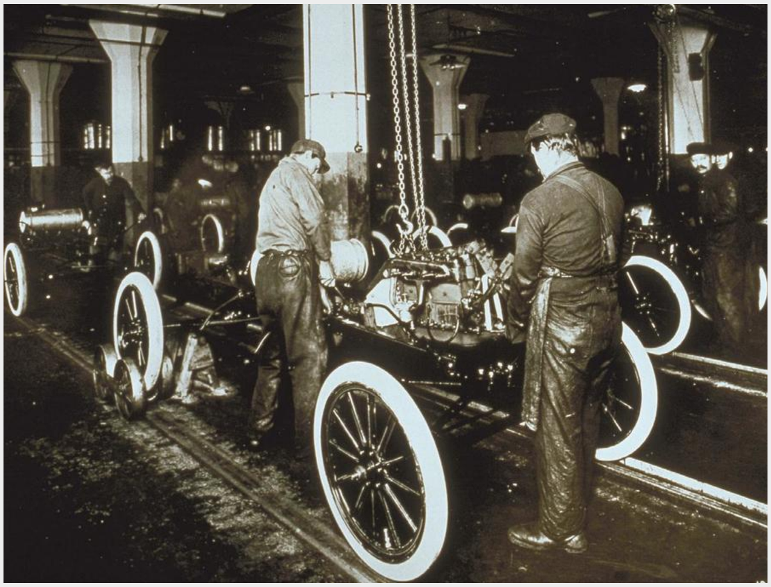
keyconcept: Continuity and change

The assembly line

Henry Ford (1863–1947) was an American industrialist who introduced the concept of the assembly line for mass production of consumer goods. Although it has changed significantly because of advances in technology, it is still used in many factories today. The assembly line adapted the factory system to a new purpose with a sequence of specialised workers repeating the same task on a series of components. The Ford Model T (1908) was the first affordable automobile. It was initially available in grey, green, blue or red. By 1914, Ford had famously insisted on a new policy, that his car should be available in 'any colour … so long as it is black'.

Source 2

> I will build a car for the great multitude. It will be large enough for the family but small enough for the individual to run and care for. It will be constructed of the best materials, by the best men to be hired, after the simplest designs that modern engineering can devise. But it will be so low in price that no man making a good salary will be unable to own one and enjoy with his family the blessing of hours of pleasure in God's great open spaces.
>
> Henry Ford, *My Life and Work,* 1922



Source 3 The assembly-line production of the Ford Model T, as seen here in a photo from the early 20th century, made automobile ownership more than a dream for many.

Ford was unusual for his time, in that he promoted high wages for workers and low prices for consumer goods. This approach would become known as Fordism. This, he believed, would allow ordinary people, not just those who were well off, to take part in what he imagined would be the peace-enhancing qualities of consumerism.

For more information on the key concept of continuity and change, refer to page 205 of 'The history toolkit'.

Check your learning 8.8

Remember and understand

1 Why were women and children popular choices as factory workers?

2 Why did workers need less skill to work in factories in the Industrial Revolution than previously?

3 What were two of the benefits of new production methods and two of the drawbacks?

4 What innovation allowed Henry Ford to manufacture the first truly affordable automobile?

Apply and analyse

5 Write a short paragraph explaining how industrialisation led to the creation of 'factory towns'.

6 Using the information provided and your own research, define the term 'Fordism' in your own words.

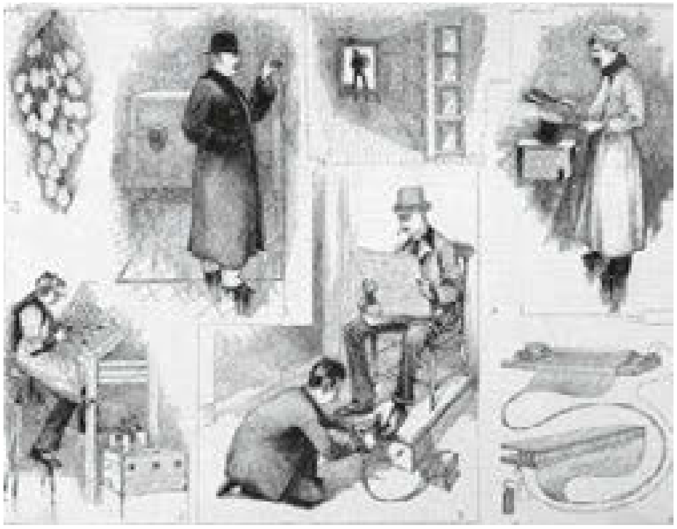
Evaluate and create

7 Imagine you are a worker in an 19th-century factory. Write a short account of a typical day in your life, making sure you highlight the advantages and disadvantages of factory work in those times.

8.9 The spread of the Industrial Revolution

The Industrial Revolution in Britain marked a major turning point in human history. Almost every aspect of daily life was influenced in some way. At around 1850, a whole series of new developments in technology led to even greater technological and economic progress. Many historians describe the period from 1850 to 1914 as the 'second' Industrial Revolution. The discovery of electricity offered yet another source of power for industry and further changes in lifestyle (see Source 1). It also led to new forms of communication, such as the telegraph and the telephone.

Recognising the potential for earning money from new inventions and markets, investors gave strong financial support to the new technologies. Although Britain attempted to stop the spread of industrial knowledge beyond its borders, it was not successful. Ideas, machines and designs were soon copied abroad. Britain began to regard technology itself as a new export. Manufacturing spread across Europe and then into other parts of the world.



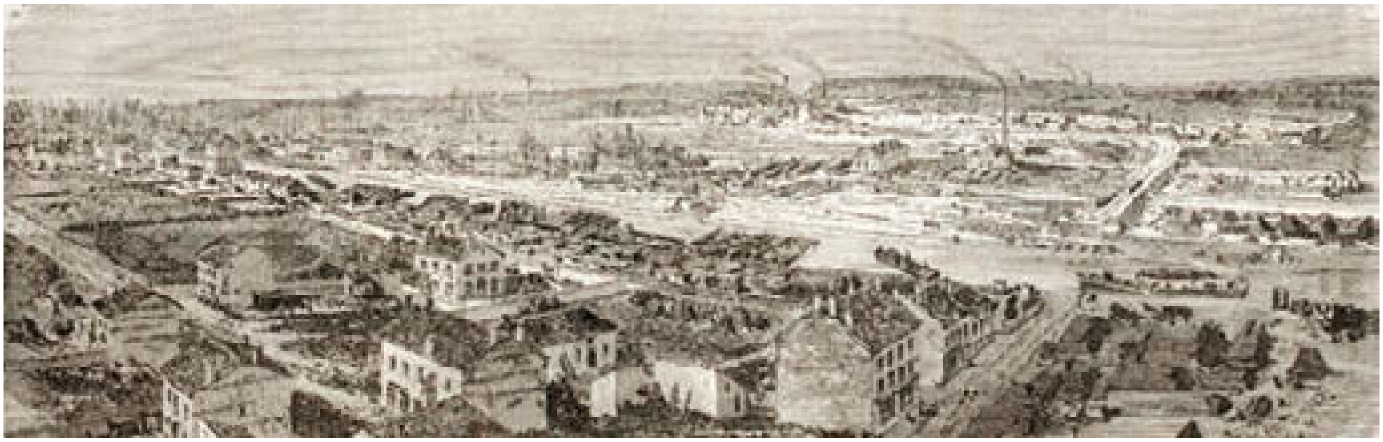
Source 1 With the discovery and harnessing of electricity, people quickly found ways to use it that made their lives easier.

Europe

One of the first countries abroad to be affected by the industrial developments in Great Britain was Belgium. Belgium was similar to Great Britain in many ways, with a strong textile trade and many potential investors. It also benefited from the large reserves of coal as a source of energy. Belgium's iron exports to the rest of Europe grew as it built blast furnaces (furnaces for melting ore to produce metals such as iron) and developed railways to transport goods.

France's development was slower. France had a primarily agricultural economy until much later in the 1800s. In coastal areas such as Normandy, however, the textile industries modernised in reaction to competition from Britain and Belgium.

Germany had large deposits of coal and iron ore, and these were quickly exploited using the new technologies. Between 1870 and the start of World War I in 1914, Germany developed at such a rate that its manufacturing output outstripped Britain's.



Source 2 France's emergence as an 'industrial' country, with industries such as large-scale coal mining, came later than Britain's.

USA

After the birth of the United States of America following the War of Independence, American industry began to grow rapidly, especially in the north-east of the USA. By 1900, the USA had a larger percentage of world manufacturing than Britain. The USA was rich in natural resources and as settlements expanded into the western regions of the country, more and more of these raw materials became available to American manufacturers. American inventors and inventions proved to be as important as any in Britain in moving the world into the modern era.

Japan

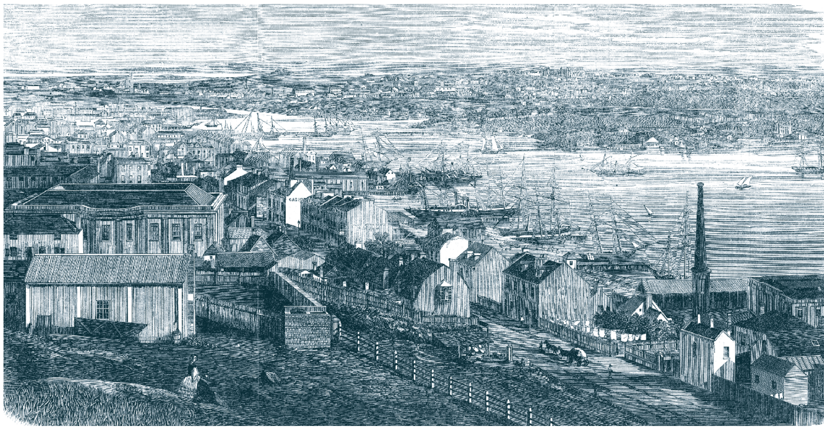
By 1868, Japan had been effectively cut off from Western influences for 260 years, after the shogun (military leader) expelled all Christian missionaries from the country and closed the borders to all foreigners. The arrival of American warships in the 1850s led to the Meiji Restoration – a period in Japanese history when the emperor was returned to power as the figurehead of a new, modern government, and trade with the West increased dramatically. Initially, large quantities of goods were imported from Europe and the Americas. Over time, however, Japan became the first country in Asia to become industrialised, as it swiftly adopted Western ideas and inventions. Japanese goods became highly sought after overseas, particularly tea, silk, cotton fabrics and buttons. Japan also imitated the West in its adoption of an aggressive policy of overseas expansion, seizing territory in China and Korea in the late 19th century.

Australia

The British decision to establish a penal colony in Australia in 1788 was largely an attempt to solve some of the problems faced by Great Britain that were a consequence of the Industrial Revolution. Rising prison populations were the result of increased crime rates in the new factory towns and among unemployed farm labourers. It was thought that this problem could be resolved by transporting criminals to a distant land.

By 1813, a steam mill was operating in Sydney, major roads had been constructed to transport goods to and from the seaports and a strong pastoral (stock-raising) industry had developed inland. By the mid-1830s, Australia had also become a colonial destination for free British migrants. As other colonies were settled, the development of transport links increased. Railways were in use in Australia by the 1850s, as well as steamship travel along the coast and major rivers. Wealth from the discovery of gold gave the Australian colonies opportunities to develop new railways and take advantage of new technologies such as the electric telegraph and electric lighting.

Despite these advances, Australia's industrial development was in many ways hectic and unplanned. This became apparent after **Federation** in 1901, when the new country was found to have three different rail gauges, which made it impossible to transport goods across state borders without changing trains. In addition to this, the states had conflicting ideas about industry (and its development or protection) and disagreed about **tariffs** (taxes) and their use.



Source 3 The settlement of Sydney, *c.* 1870

Check your learning 8.9

Remember and understand

1. List some of the countries that were affected by the Industrial Revolution after Britain.

Apply and analyse

2. Write a short paragraph comparing and contrasting the 'first' Industrial Revolution in the 1750s and the 'second' Industrial Revolution 100 years later.
3. Explain how the Industrial Revolution differed in Britain and one other European country.
4. Name three areas in which Japan's modernisation followed a Western model, and name the countries from which it copied.

Evaluate and create

5. What evidence was there in 1901 that the development of Australia had been hectic and unplanned?

8.10 Later developments in technology and science

Chemistry

Prior to the Industrial Revolution, scientific thought worked on the theory that four basic elements – fire, earth, water and air – were the components of all things. Scientists began to extend this with the first creation of a table of chemical elements in 1789. This marked the beginnings of the modern periodic table. French chemist Antoine Lavoisier identified 23 elements. He named different chemical compounds made by the combination of these chemical elements and developed a system that recognised the weight of atoms.

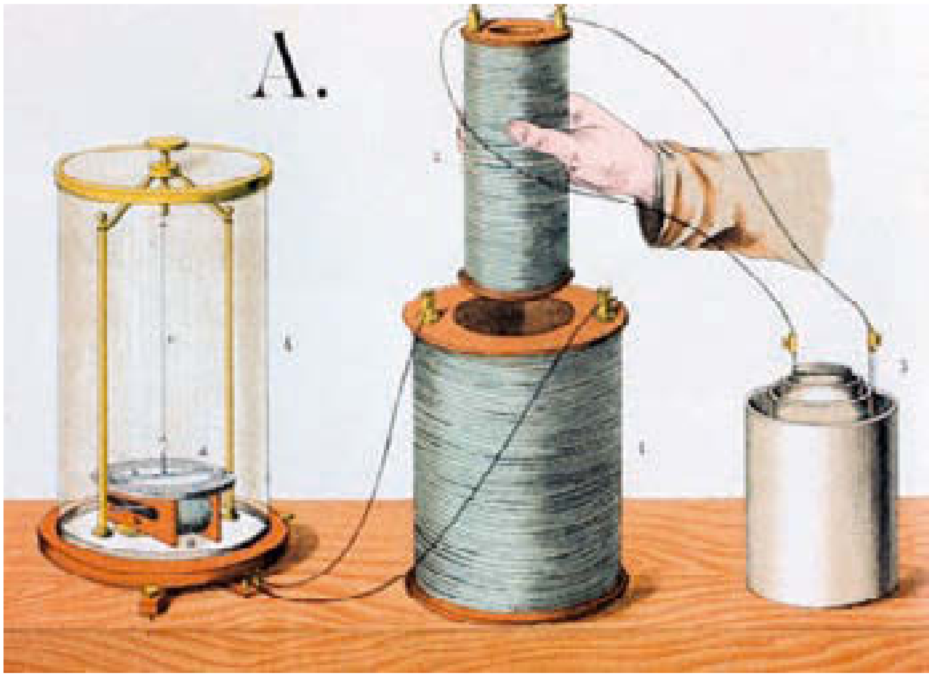
During the 1800s, other scientists broke down over 70 000 chemical compounds, often in search of new materials for inventions or for improvements to existing materials. In the process, they discovered how to make petroleum, vulcanised rubber, Portland cement and synthetic dyes. Polish–French researcher Marie Curie (see Source 1) isolated the element radium and coined the term 'radioactivity', which would become a controversial source of power after the Industrial Revolution.

Electricity

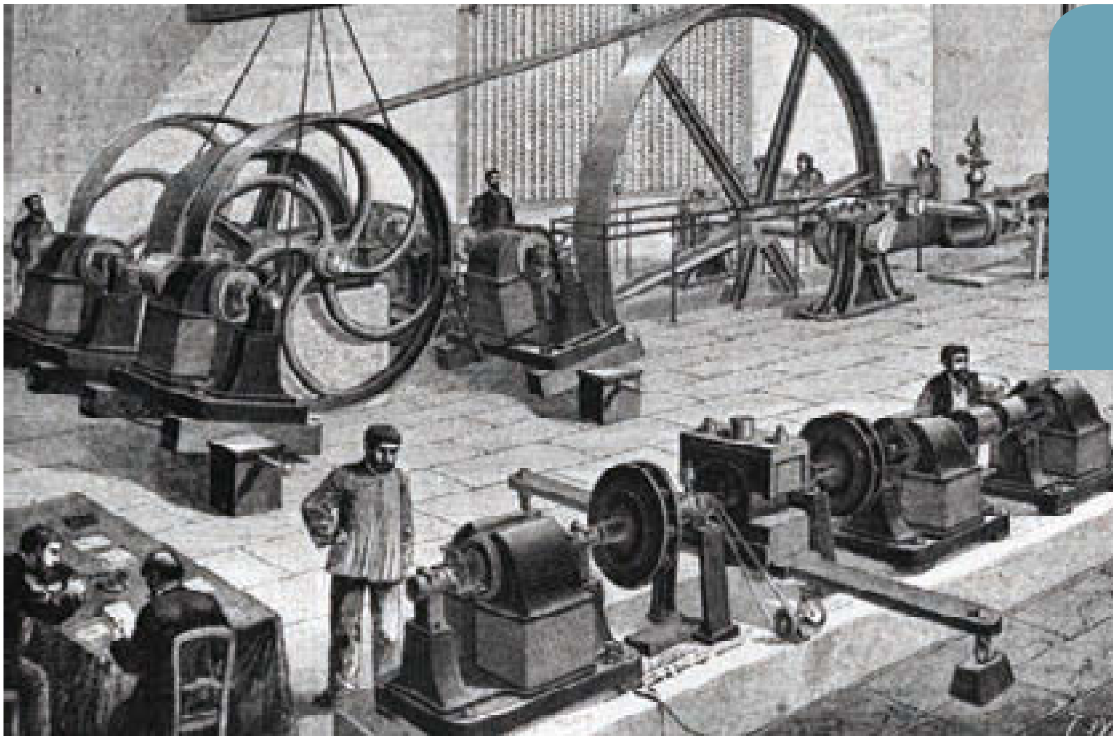
In 1791, Italian scientist Luigi Galvani discovered that he could make a dead frog's legs twitch if he struck them with a spark. His fellow experimenter Alessandro Volta recognised the potential of Galvani's discovery, and developed a technology to store the energy ('electricity') in a cell or battery. This ability to store and use power was to be successfully developed over the following few years, creating a new energy source.

In the 1880s, electric power stations were built. These stations offered an alternative to steam engines for driving machines and to gas for lighting. Electricity was not the work of one person or nation. The English scientist Michael Faraday produced the first continuous flow of electric current. His work in electromagnetic induction (see Source 2) was the basis for dynamos and other electric motors. He produced current by rotating a coil between the two poles of a horseshoe magnet. A dynamo turned the mechanical power needed to rotate the coil into electric current. This current could then drive a machine by using the energy.

Source 1 Physicist and chemist Marie Curie in her laboratory



Source 2 Faraday's electromagnetic induction experiment, 1882



Source 3 An 1887 woodcut showing an early power station

Power stations were first built as a source of power for electric lighting. Developed through the work of Joseph Swan, an Englishman, and Thomas Edison, an American, they produced 'Ediswan' bulbs to light houses and streets.

Power stations initially used steam engines to turn the dynamos to generate electricity. In 1884, Charles Parsons invented the steam turbine, which allowed for a greater speed of rotation by forcing a blast of steam along a tube, turning a rotor at great speed.

Factories driven by electricity were cleaner and safer, as they did not require the large belts used to drive machinery like those in steam-powered stations. Newer industries mainly used this new power source, and, unlike coal-powered industries, they could be located anywhere, as long as there were power lines to carry the electric current. In some areas water was used to drive the electric turbines (hydroelectric power), so factories could be built in areas such as Scotland where there was limited coal.

Wires were strung around Britain to carry power to factories and homes. Power grids were created to share the electricity produced and to service high-demand areas such as cities. A reliable supply of electricity meant that factories no longer relied on a supply of coal to power them. As a result, they were free to move away from coal mines in the north and west of Britain closer to cities in the south like London.

Communications

The discovery of electricity helped to develop an invention that revolutionised mass communications – the telegraph. The telegraph allowed text messages to be transmitted long distances without the need to physically deliver a letter. Telegraphs were sent using a coded system of sounds to represent the alphabet. For example, Morse code used short electrical impulses (dots) and slightly longer ones (dashes) to spell out the letters of messages.

In 1851, London and Paris were linked by an undersea cable and by 1858, the first transatlantic cable was laid, stretching from Europe to North America. By 1866, this transatlantic cable allowed rapid communication between Britain and the USA. The telegraph helped to bind together the distant parts of the British Empire and was an important part of the development of Australia. From 1858, the Australian capital cities were all linked by telegraph. The Australian overland telegraph from Darwin to Port Augusta in South Australia was completed in 1872. This, together with new undersea cables, provided an instant communication channel between Australia, Britain and Europe for the first time.

Check your learning 8.10

Remember and understand

1 In what year was the modern periodic table first developed?
2 Which scientist was responsible for the discovery of the element radium?

Apply and analyse

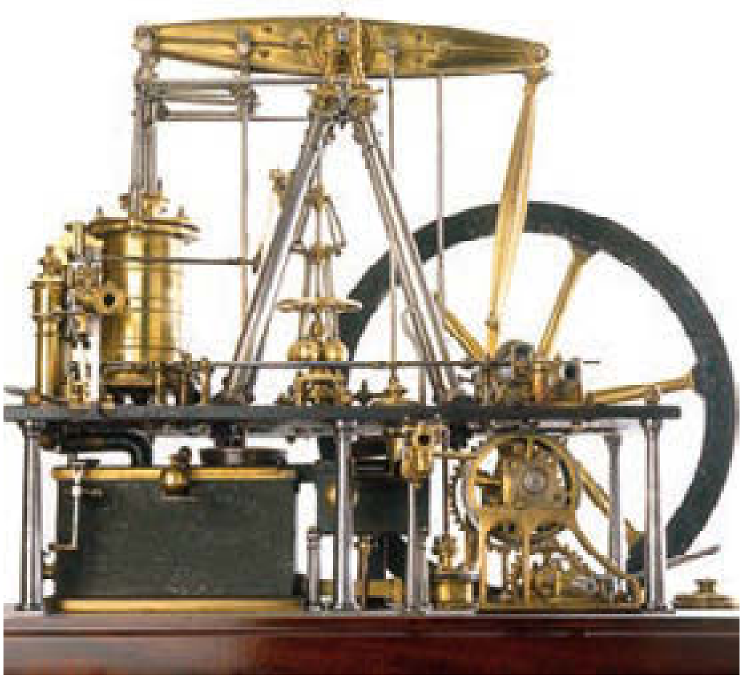
3 Describe some of the advantages of the first electric power stations.
4 Why was the development of the battery so important for users of electricity?
5 How did the growth of electricity-powered factories lead to a general movement of population from the north to the south?

8A rich task

Inventions of the Industrial Revolution

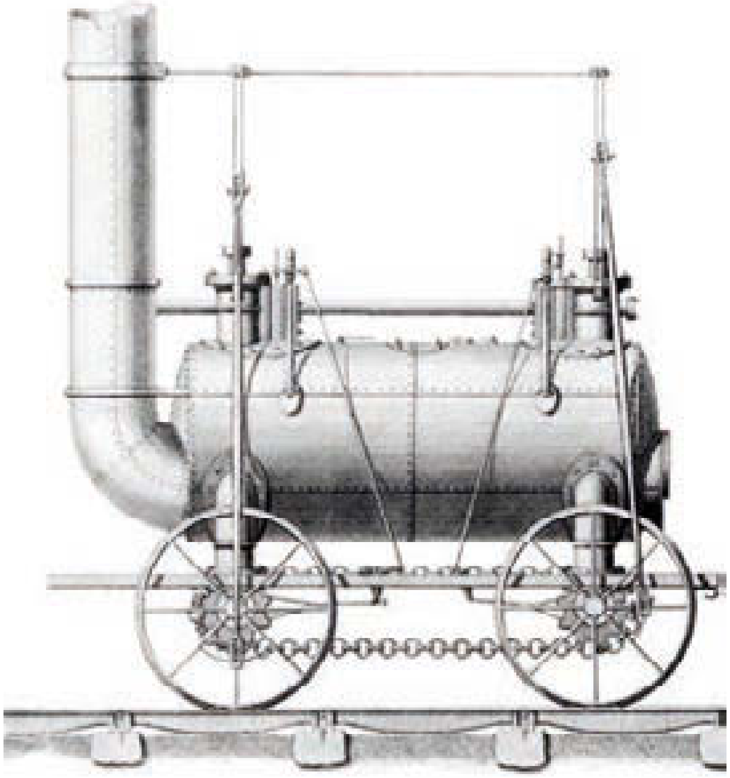
During the Industrial Revolution, new technologies and inventions transformed the way that people lived and worked. Major changes in farming, mining, agriculture, communication and manufacturing changed almost all aspects of life.

In this chapter, you have learnt about many significant inventions from the Industrial Revolution such as the flying shuttle, the spinning jenny, the steam engine, the internal combustion engine, electricity and the telegraph. These are only a few of the many inventions and discoveries that changed the way people lived and worked at the time. Others include the sewing machine, the telephone, the light bulb, the phonograph, the circular saw, the battery, the typewriter and even the first revolver. All of these inventions contributed to the modern world in some way.



Source 1 A reconstruction of James Watt's steam engine

Source 2 The flying shuttle allowed the thread to be shot back and forth across a wider weaving bed, producing much wider lengths of cloth much faster.



Source 3 George Stephenson's locomotive *Blucher* was the first successful steam-powered train. It was completed and tested on the Cillingwood Railway on 25 July 1814.

skill**drill**

Creating and delivering an audiovisual presentation

You have probably created several PowerPoint presentations already. You may have also tried out some other audiovisual presentation software, such as Prezi, which is freely available on the Internet. Whichever program you choose, it is important to use it effectively, and avoid some common problems of these types of presentations. Use the following steps to help you avoid these issues.

Step 1 Design your presentation

- Plan your presentation carefully so it has a clear beginning, middle and end.
- Make sure you present the content in clear, concise dot-point form, *not* as large slabs of text.
- Don't fill up your PowerPoint with lots of random pictures that are not related to the content. Make sure each visual is accompanied by a caption that explains why it is relevant to the presentation.
- A common mistake is to have objects and text moving on the screen in a way that just distracts the audience. Use graphics, sounds, video, animations and transitions only if they add value to the point being made, not just because you think they will look or sound good.
- Use a design that ensures your audience can clearly see and read the slides. Make sure there is enough contrast between the text colour and the background colour on the slide, and make sure your font size is large enough.

Step 2 Deliver your presentation

- When delivering a PowerPoint presentation to an audience, you should do more than just stand up and read out the text on each slide. Instead, talk in a way that develops and expands on the points on each slide. Carefully plan in advance what you are going to say during each slide. Record this plan on cue cards, and refer to these cards during your speech to remind you what to say.
- One thing at a time! At any moment, what is on the screen should be the thing you are talking about. Your audience will quickly read every slide as soon as it's displayed. If there are four points on the slide, they'll have read all four points while you are still talking about the first point. Plan your presentation so just one new point is displayed at any given moment. Navigate to the next point only when you are ready to talk about that next point.
- Speak clearly – not too fast, not too slow. Vary your tone and pitch to make your presentation more interesting.
- Make eye contact with different members of your audience. *Do not* just look down at your cue cards.

Apply the skill

1 Research, prepare and present an audiovisual presentation about three significant inventions created during the Industrial Revolution that were not discussed in this section. Use the following questions to structure your presentation:

 a Who invented it?
 b When was it invented?
 c How did it work?
 d Why was it significant?

2 Your presentation should be well researched and based on relevant and reliable sources. For detailed information on this skill, refer to page 241 of 'The history toolkit'.

Extend your understanding

As you listen to the presentations of your classmates, complete the peer assessment proforma below. Ask your teacher to photocopy several copies so that you can complete one for each presentation you listen to.

Name of presenter:		**Name of person completing peer assessment:**
Component of presentation:	What did the presenter do well in this regard?	What could the presenter improve upon in this regard?
PowerPoint design:		
Oral presentation:		

Give each classmate your completed peer assessment. Collect the peer assessments that your classmates completed as they listened to your presentation. Read their feedback, and then complete a short self-assessment by responding to the following questions:

- What did I do well in terms of my PowerPoint design?
- What could I improve in terms of my PowerPoint design?
- What did I do well in terms of my oral presentation?
- What could I improve in terms of my oral presentation?

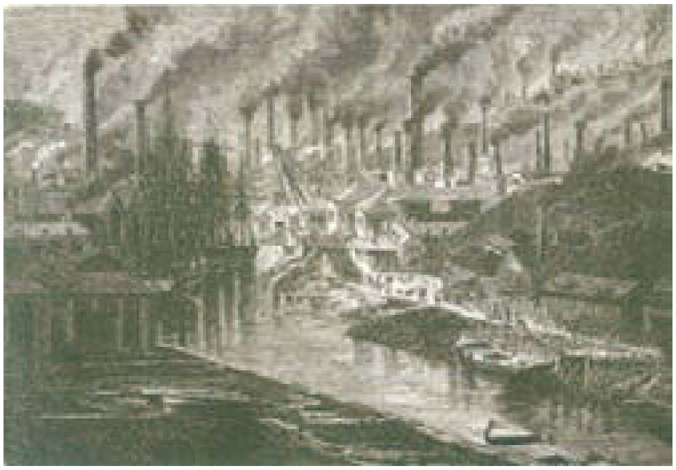
8.11 Working conditions

While it cannot be denied that the Industrial Revolution improved living standards of most people across Britain, these improvements came at a high price. The obvious winners were the industrialists, the people who owned the mills, the factories and the mines. The new middle class also benefited from technological advances, making their lives more comfortable. However, many more people were forced to give up their traditional rural lifestyle for a life in one of the new industrial cities – working long hours and living in cramped and unsanitary conditions.

Britain's 'dark satanic mills'

The working conditions and experiences of men, women and children during the Industrial Revolution varied from person to person and from one industry to the other. The proportion of people in Britain working in manufacturing in 1801 was estimated at 40 per cent. By 1871, this had risen to 60 per cent. Many people across Britain were still employed in agriculture, construction, domestic service or smaller workshops, and their working lives remained largely unchanged. However, life was very different for those in the factories and who struggled to survive on low wages and were forced to work in harsh conditions, as owners operated for a time without any government regulation.

Factory and mine owners often cut corners with safety and conditions in the pursuit of higher profits. This included enforcing long working hours and using cheaper labour in the form of women and children. Long working days took their toll on families, and children were dragged into working life with little opportunity for education.



Source 1 A 19th-century engraving showing copper foundries in Swansea, Great Britain

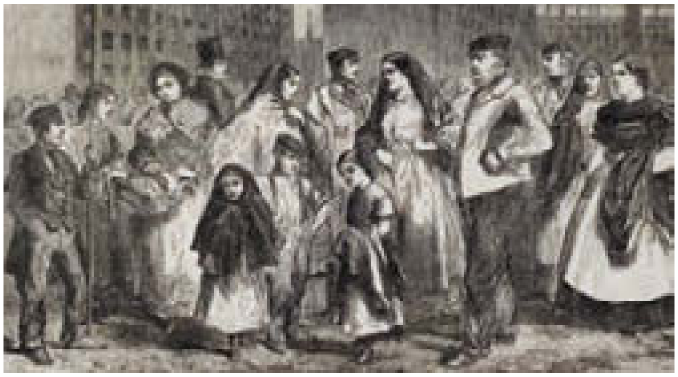
The phrase 'dark satanic mills' was first used by the English poet William Blake in 1808. It was frequently used in the 19th century to refer to the miserable working conditions of labourers in Britain. Many writers of the time were appalled by the plight of poor people whose work seemed endless and unrewarding, and whose lives were cut short by poverty, disease and injury. One of these concerned individuals, Friedrich Engels, a German industrialist and philosopher, wrote extensively about this situation (see Source 2).

Source 2

> … a mass of children work the whole week through in the mills or at home, and therefore cannot attend school. The evening schools, supposed to be attended by children who are employed during the day, are almost abandoned or attended without benefit. It is asking too much, that young workers who have been using themselves up twelve hours in the day, should go to school from eight to ten at night. And those who try it usually fall asleep, as is testified by hundreds of witnesses in the Children's Employment Commission's Report. Sunday schools have been founded, it is true, but they, too, are most scantily supplied with teachers, and can be of use to those only who have already learnt something in the day schools. The interval from one Sunday to the next is too long for an ignorant child to remember in the second sitting what it learned in the first, a week before.
>
> Friedrich Engels, *The Condition of the Working-Class in England in 1844*

Child labour

When the Industrial Revolution began, children were seen as ideal employees. They were small enough to fit between the new machinery, they were cheap to employ and their families were grateful for the extra income. At the time, there was no real concern about their education being affected as education was not compulsory. Most working-class families could not afford to send their children to school anyway.



Source 3 An artist's impression of a group of mill workers in Manchester, *London Illustrated News*, 1840

Source 4 Children working in factories were frequently exploited and injured.

Children often started work at the age of four or five. Their jobs were often simple, but physically demanding and dangerous. They included collecting dropped fluff from underneath the weaving machines or acting as helpers in coalmines. In many cases, child workers were orphans provided to the factories or mills by the local authorities.

Children's pay was well below that of adults – often about 20 per cent of the full adult wage. Wages for children were sometimes paid in the form of vouchers that could only be used at stores owned by the factory owner. There, the children could use them to purchase clothing or basic foods such as flour. This system allowed the factory owner to avoid paying wages in cash and helped them to make extra profits on sales.

Even with long hours and low pay, children could still earn more in the factory towns than in the country. Over time, social reforms raised the minimum age, shortened the working day, increased wages and introduced some form of education.

Child labour in factories also declined as complex machinery became more difficult for children to handle. In other areas, such as mining, their use as labourers was limited or barred. It is hard for us now to imagine their lifestyles or the conditions in which these children worked. Source 5 comes from evidence given to a British government inquiry into child labour in factories in 1833.

Source 5

> I work at Mr Wilson's mill. I think the youngest child is about seven. I daresay there are 20 under 9 years. It is about half past five by our clock at home when we go in … We come out at seven by the mill. We never stop to take our meals, except at dinner.
>
> William Crookes is overlooker in our room. He is cross-tempered sometimes. He does not beat me; he beats the little children if they do not do their work right … I have sometimes seen the little children drop asleep or so, but not lately. If they are catched asleep they get the strap. They are always very tired at night … I can read a little; I can't write. I used to go to school before I went to the mill …
>
> Evidence from a young textile worker, Factory Inquiry Commission, Great Britain, Parliamentary Papers, 1833

Check your learning 8.11

Remember and understand

1 Why did women and children make up a large part of the industrial working population in the early years of the Industrial Revolution?

Apply and analyse

2 In Source 5, what do you believe the young worker is trying to say about working conditions in the factory and the treatment of other child workers?

Evaluate and create

3 Summarise Friedrich Engels' findings in Source 2 about the condition of the working class in England.

4 Why might a writer such as Friedrich Engels be biased in his view? Carry out some research into his political beliefs and show how they might have influenced
his writing.

5 Write a newspaper report in the role of a 19th-century reporter investigating child labour in a cotton mill. Describe what the children's work day is like and make recommendations for reform.

8.12 Living conditions

In the 1750s, before the Industrial Revolution began, only 15 per cent of the population of Great Britain lived in towns or cities. By 1850, the urban population had risen to 50 per cent. By 1880 it had risen again to 80 per cent. This process of **urbanisation** was due to changes in farming practices, production methods and the lure of new jobs in the factory towns. Between 1801 and 1871, the proportion of the British population working in manufacturing rose from 40 per cent to 66 per cent. All of these changes had dramatic effects on how people lived.

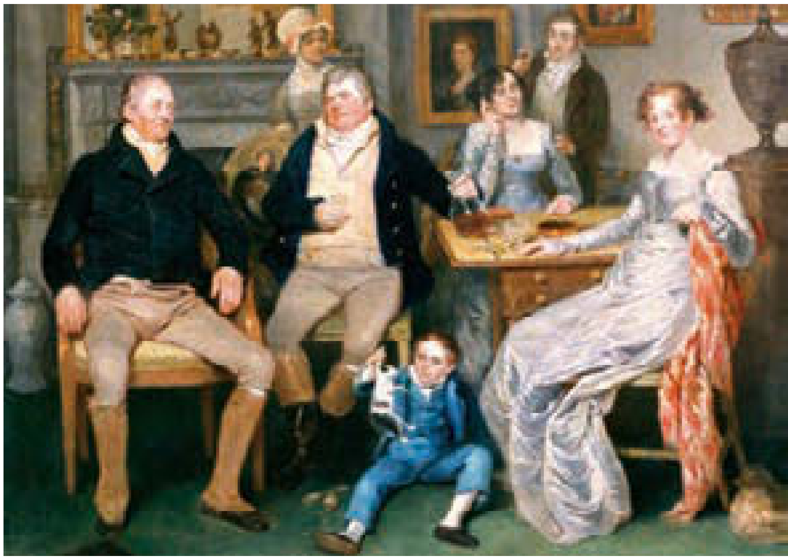
Conditions for the rich and poor

Huge differences between the living conditions of the rich and poor in Britain existed long before the start of the Industrial Revolution. Prior to 1750, Britain's feudal history and strict class system dictated how people lived and where they worked. From 1750 onwards, rapid changes in technology and society gave birth to a new social class (known as the 'middle class'). Despite this change, the Industrial Revolution was initially responsible for widening the gap between rich industrialists and poor factory workers even further. Some key facts about living conditions for different social classes in the 1800s are included in Source 3.

On top of the social **hierarchy** were the aristocracy. These people included people of royal blood – dukes, earls, lords and barons – with strong family traditions and reputations. They were often landowners who lived off rental income and led privileged lives as members of 'high society' who lived in manors and stately homes. They possessed enormous wealth, land and political influence. In this world, good breeding and a title were seen as more important than wealth – this was assumed.

The middle classes included factory owners, industrialists, doctors and lawyers whose generous incomes allowed them to establish their homes on the outskirts of the new towns and cities where the air was clean and there was more space for larger homes. These areas grew as a result of new railway lines that allowed the rich to commute from home to work in the city.

By contrast, the majority of the working class lived closer to the factories, in slum areas with poor sanitation. Houses were built back-to-back to save space. New apartment blocks were also built quickly and cheaply to meet demand. There were very few building or fire regulations so accidents and house fires were common. There was no proper sewerage, no fresh water and little or no garbage disposal. In Liverpool in 1865, 40 per cent of young children died in such conditions, and the average life expectancy was just 29 years. Birth rates were low, but the population continued to grow due to the constant flow of people from the countryside. Those who endured such conditions often turned to alcohol and other drugs to help them cope with the harsh conditions. Crime was widespread, particularly in the slums of the larger cities such as London (see Source 2).



Source 1 There were enormous differences between the living conditions of the rich and poor in Britain prior to the Industrial Revolution.

Source 2

> … the social order makes family life almost impossible for the worker. In a comfortless, filthy house, hardly good enough for mere nightly shelter, ill-furnished, often neither rain-tight nor warm, a foul atmosphere filling rooms overcrowded with human beings, no domestic comfort is possible. The husband works the whole day through, perhaps the wife also and the elder children, all in different places; they meet night and morning only, all under perpetual temptation to drink; what family life is possible under such conditions? Yet the working-man cannot escape from the family, must live in the family, and the consequence is a perpetual succession of family troubles …

Friedrich Engels, *The Condition of the Working-Class in England in 1844*

Source 3 Conditions for British social classes during the 1800s

Living conditions for the aristocracy (nobility)	Living conditions for the middle class	Living conditions for the poor
• Birth mattered more than income. The poor and lazy cousin of a duke would be acceptable in high society over a millionaire industrialist from a lower class. • Some lords had large country houses, and town houses in London. They were waited on by servants. • During the 1800s, members of the aristocracy dominated all levels of government. • A young aristocratic lady who was eligible for marriage would 'come out' as a debutante, when she was presented to Queen Victoria. On this special occasion she wore a white dress and a headdress. • Boys of the nobility had governesses and nannies, then attended elite schools. Girls were mostly educated at home then prepared for marriage. Some girls went to boarding school. By the late 1800s, a small number were able to go to university.	• Many middle-class people aspired to join the upper classes. Wealthy middle-class businessmen would socialise with the aristocracy. Some donated large sums of money to be granted a knighthood. • Middle-class people lived in houses in the suburbs and commuted to work in the city. Even the poorest middle-class home would have a servant. • Many middle-class Victorian women enjoyed shopping – the first department store opened in London in 1863. • Over time, some middle-class women sought a university education. They also became involved in the women's **suffragette** movement. • Many middle-class boys went to grammar schools. Girls increasingly went to school, but were still expected to find a husband and learn how to run a home.	• Working-class people lived in cramped houses in city slums and had no access to running water or sewerage systems. • Crime in the slums was rife and overcrowding led to the spread of many diseases. • At the start of the 19th century, few poor people received an education. In 1880, a new law made primary school compulsory for all children. • Working-class leisure activities included playing or watching football, bicycling clubs, reading the newspaper and attending the music hall.

As urban areas grew, new technologies were applied in building, even in workers' housing. Planned, drained and

transport allowed workers to live further away from their work places. Cities began to develop suburbs. In 1863, the first part of London's underground railway network opened, linking suburban trains to the city centre. By the 1870s, the ability to create skyscrapers allowed for even denser retail and office areas in city centres, where land was more expensive.

Better street lighting helped transform the atmosphere of the cities at night, encouraging leisure activities later in the day and after dark, as people felt safer.

Check your learning 8.12

Remember and understand

1 Why did people move from rural areas to the towns and cities during the Industrial Revolution?

2 Where did most unskilled workers live in Britain during the Industrial Revolution and in what sort of conditions?

3 Why did the population of factory cities continue to grow, despite low birth rates?

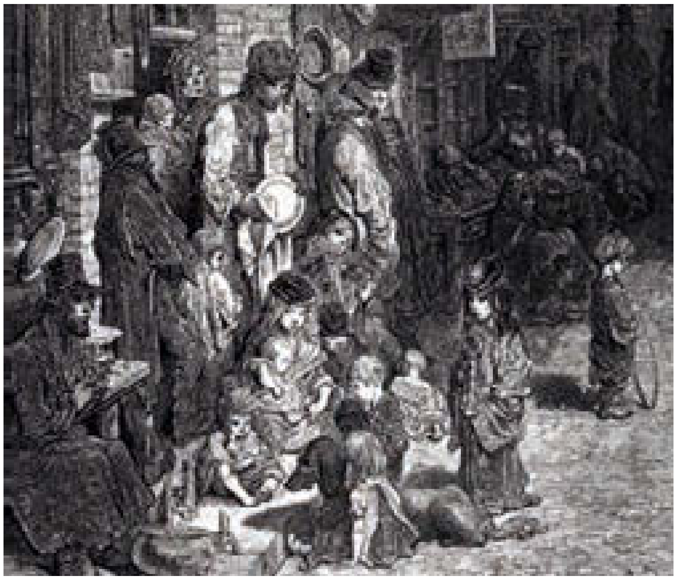
Apply and analyse

4 What was the average life expectancy in Liverpool in 1865? Did people tend to actually die at this age, or was there another factor that lowered life expectancy?

5 Write a paragraph describing how, after a bad start, the Industrial Revolution started to improve living conditions for city dwellers.

Evaluate and create

6 Using the statistics provided and information gathered on the Internet, create three graphs that illustrate the key changes in urban populations that took place in Britain from 1750 to 1880.



Source 4 An artist's impression of poor people in Whitechapel, a London slum

8B rich task

Working conditions for children during the Industrial Revolution

Many of the early textile factory owners employed large numbers of children. Children were seen as good workers because they were paid less, and were small enough to crawl under the machines to repair broken threads. They were often forced to do this when the machines were operating, and many children were injured as a result. The factory owners paid **overseers** to make sure the children worked as hard as they could. The more work the children did, the more the overseers were paid.

It was not until the 1830s when certain politicians, concerned about the working conditions that had developed as a result of industrialisation, began introducing laws to regulate the factories in terms of conditions like the use of child labour and the length of the workday.

Each of the following sources provides different views about the nature of working conditions for children during the Industrial Revolution.

Source 2

Q: Explain what you had to do.

A: When the frames are full, they have to stop the frame, and take the flyers off, and take the full bobbins off, and carry them on to the roller, and then put the empty ones on.

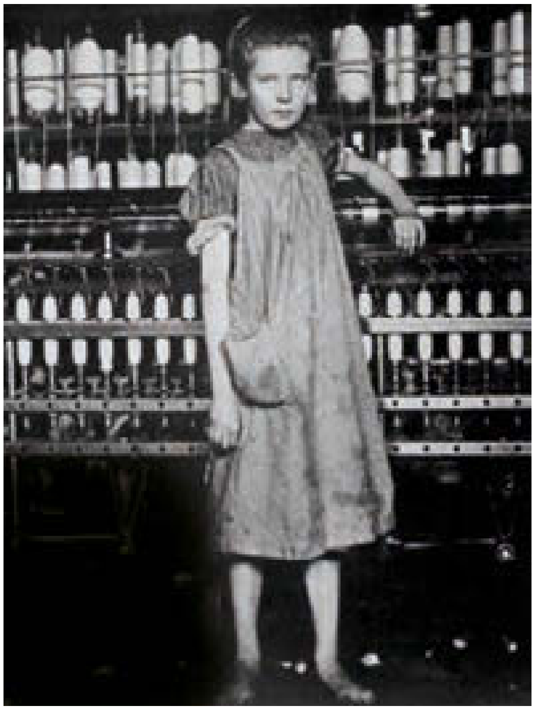
Q: Suppose you slowed down a little, what would they do?

A: Strap us. The girls had black marks on their skin many a time, and their parents dare not come in about it, they were afraid of losing their work.

Q: What part of the mill did you work in?

A: In the card-room. It was very dusty. The dust got up my lungs, I got so bad in health. When I pulled the baskets all heaped up, the basket pulled my shoulder out of its place and my ribs have grown over it. I am now deformed.

An extract from an interview with Elizabeth Bentley, who began working in factories at the age of six. The interview was conducted as part of a parliamentary inquiry into conditions in the textile factories in 1832.



Source 1 This photograph, taken in 1908, shows a young barefoot girl standing next to a spinning frame in her workplace, a North Carolina cotton mill.

Source 3

I have visited many factories, both in Manchester and the surrounding districts, during a period of several months and I never saw a single instance of corporal punishment inflicted on a child. The children seemed to be always cheerful and alert, taking pleasure in using their muscles. The work of these lively elves seemed to resemble a sport. Conscious of their skill, they were delighted to show it off to any stranger. At the end of the day's work they showed no sign of being exhausted.

An extract from 'The Philosophy of Manufactures', 1835, by Dr Andrew Ure. Dr Ure was a supporter of the new industries.

Source 4

… In such an establishment [i.e. a factory] … between 700 to 1400 persons, of all ages and both sexes, almost all working by the piece, and earning wages of every amount between two shillings and 40 shillings a week, are engaged in producing one ultimate effect, which is dependent on their combined exertions. Any stoppage, even any irregularity in one department, deranges the whole. A strict and almost superstitious discipline is necessary to keep this vast instrument going for a single day. Now how, ask the mill-owners, could this discipline be kept up, if the sub-inspectors were at liberty to walk over our establishments at all hours; listen to the complaints and jealousies of all our servants, and at their instigation [urging] summon us as criminals before the magistrates?

An extract from a letter of complaint by Nassau Senior, a factory owner, to parliament after the Factory Act of 1833 was introduced to give some protection to child workers. He believed that the Act would allow government inspectors to interfere with the smooth running of cotton factories.

skill**drill**

Using information from a range of sources as evidence in a historical argument

The primary sources that historians use to form opinions and arguments about the nature of working conditions for children in the early-19th-century factories tell different stories. It is the job of historians to analyse these sources, identify what evidence they provide to support or refute (not support) particular arguments, and come to a conclusion about their usefulness and reliability.

It is important to:

- identify who created each source and the reason why it was created
- identify any potential bias
- write your argument, using the sources as evidence
- explain why each particular source supports your argument
- give reasons why you consider the sources that do not support your argument to be not as important or as valid.

Apply the skill

1 Examine Sources 2–4 carefully and complete a copy of the table below in your notebook.

	Source 2	Source 3	Source 4
What evidence does this source provide about conditions in factories for children during the Industrial Revolution?			
Who wrote or created it?			
Why was the source created?			
Is the source reliable?			

2 Once you have completed the table, use the information you have gathered to write an historical argument about the working conditions for children in the early 19th century, using the plan provided below.

- **Title:** What were conditions like for children in Britain working in 19th-century factories?
- **Introduction:** The Industrial Revolution led to a massive increase in … (introduce the context of your piece and the focus on the working conditions of children within that context).
- **Paragraph 1:** Some sources say … (explain which sources indicate that conditions were bad; give examples of some of the bad conditions).
- **Paragraph 2:** However, other sources say … (explain which sources indicate that conditions were acceptable or necessary; give examples of some of the arguments provided).
- **Paragraph 3:** We have to be careful about which sources we use because … (explain the problems with some of the sources in terms of reliability and bias).
- **Conclusion:** Overall, the evidence suggests … (summarise the evidence and give your informed opinion about the nature of working conditions for children in this period).

Extend your understanding

1 Some important people were strongly opposed to the use of child labour in factories during the Industrial Revolution. Eventually, parliament passed several Acts that attempted to impose regulations that would lead to improved conditions for children. Use the Internet to find out about this legislation, and complete a new table in your notebook:

Name of Act	Year it was introduced	How did it attempt to improve conditions for children?	How effective was it?

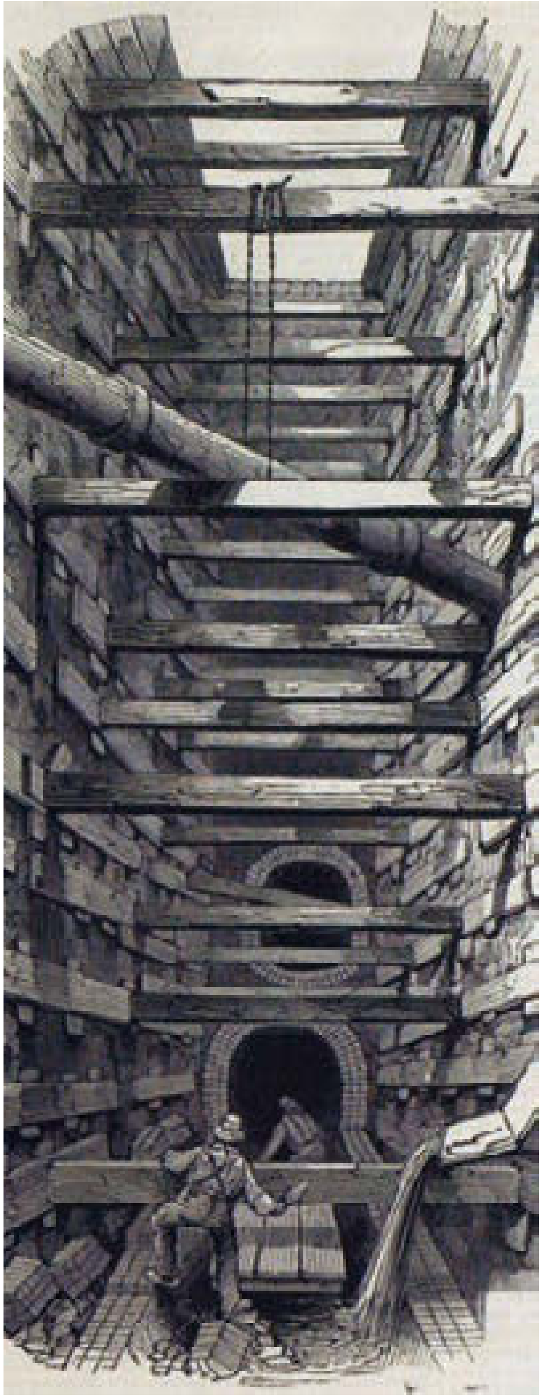
8.13 Short-term impacts of the Industrial Revolution

Between the 1750s and 1914, Britain, the USA and most countries in Europe transformed into industrial societies. New technologies and production methods changed societies in positive and negative ways in both the short and long term. Growth in the development of cities, changes in living and working conditions and the introduction of new laws became apparent fairly quickly. Other changes took place over much longer periods and were not initially obvious. Indeed, many argue that we are only now beginning to see many of the long-term effects of the Industrial Revolution.

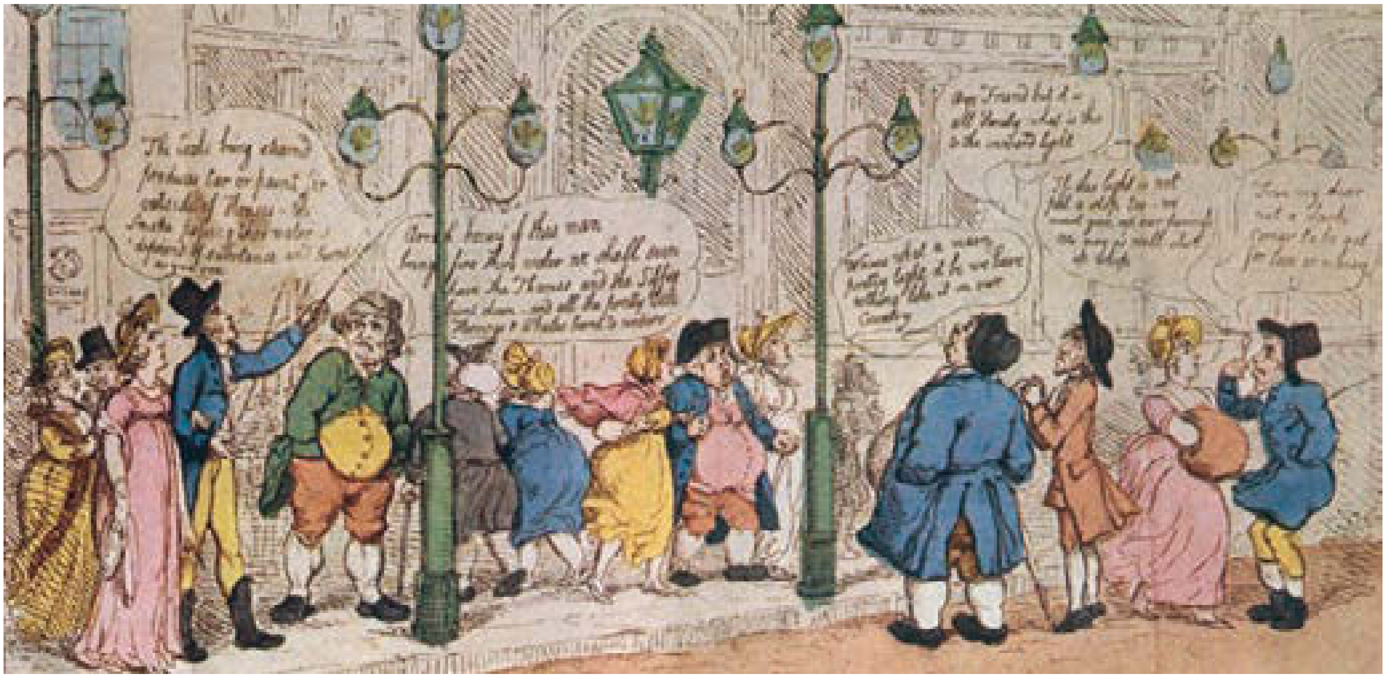
Population growth and urban planning

One of the most obvious short-term impacts of the Industrial Revolution was the dramatic increase in world population. In 1750, the population of England and Wales was around 5.5 million people. By 1900, this figure was around 32.5 million. Throughout Great Britain and the rest of Europe, there was a mass movement of people from the rural areas to the growing cities. In 1801, only 17 per cent of the population of Europe lived in the cities. By 1891, this had grown to 54 per cent. In Britain, the growth cities were Leeds, Manchester and Birmingham, as well as London. After terrible initial problems with disease caused by poor or non-existent sanitation, city reform began with the introduction of some **urban planning**. Over time, conditions in the urban slums of factory towns and cities improved. The tenements (overcrowded rooming houses) were pulled down and replaced with new urban settlements, with positive consequences for residents. For example:

- Residents in new housing, who previously had no running water and shared an outside toilet, now had access to running water, central heating and improved sewerage systems (see Source 1) that included their own toilets. Health conditions improved and there were fewer outbreaks of disease.
- Planned, drained, and uncluttered and open spaces were created for sport and entertainment.
- Gas-powered (see Source 2), and then electric, street lighting helped transform the atmosphere of the cities at night, reducing the gloomy, dangerous streets and encouraging leisure activities after dark, such as visits to theatres and music halls.
- Cities began to develop suburbs (outlying communities) and new public transport systems allowed workers to live further away from the factories in which they worked. First there were horse-drawn trams and then came cable trams or electric trolley systems. The opening of London's underground railway network in 1863 encouraged more people to use public transport to move between their homes in the suburbs and work. As the population increased, so did the transport capacity and new lines were developed to service growing areas.



Source 1 The building of a London sewer, 1845



Source 2 'A peep at the lights in Pall Mall' is a satirical look at people's reactions to the new invention of gas-burning streetlights in London in 1807.

Improvements in living standards

There were other positive consequences of the Industrial Revolution in the lives of many people.

- Improvements in agriculture throughout the period of the Industrial Revolution reduced the risk of famine through crop failure. Increased food production also meant that people could afford better food in larger quantities, which in turn helped them stay healthier.
- Sport was encouraged in 'leisure time' in order to keep workers healthy. Sport and recreation became more important as working hours reduced during the 19th century.
- Mass entertainment, such as theatres and spectator sports, developed alongside newspapers and magazines for people of all classes. Literature was no longer just for the wealthy and learned.
- The development of railways meant that travel times were speedier. It also meant that travel for leisure was affordable, even for the working classes.
- Mass-produced consumer goods, such as clothing and crockery, became more affordable.
- The use of the telegraph and telephone meant that news could quickly be reported from around the world. Industrialists, merchants and ordinary people benefited from these more immediate ways of communicating, as well as from faster postal times from improved road and rail networks.

Historians and economists agree that standards of living did improve in the 19th century, although they disagree about the timing of its benefits to the working class. For example, were large improvements in the lives of working-class people evident in the early or mid-1800s? Some studies have shown that workers' incomes grew rapidly from the 1820s. However, others contest whether this indicator of improvement balanced out the negative consequences of the Industrial Revolution, such as the harsh working conditions, high rents and crowded living conditions, and pollution.

Check your learning 8.13

Remember and understand

1 Identify the ways in which cities began to change in the second half of the 19th century.

2 Explain why sport and entertainment became more popular in this period.

Apply and analyse

3 Using Source 2 outline the ways in which the introduction of street lighting changed people's way of life.

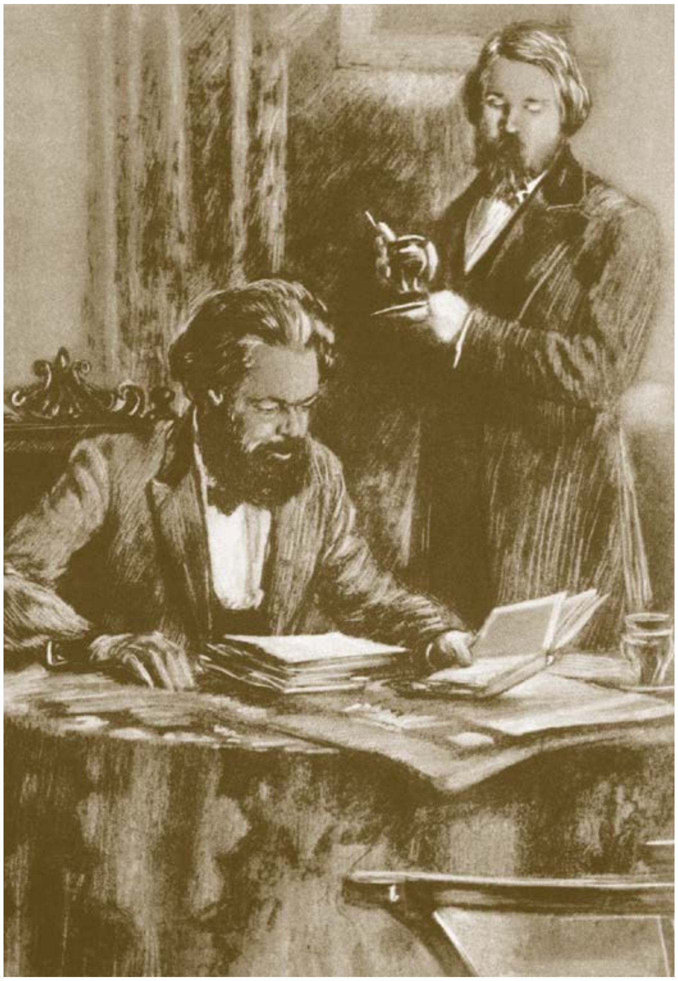
Evaluate and create

4 In two columns, list the positive and negative aspects of the Industrial Revolution for working-class Britons in the 19th century. Decide whether it was a positive or negative development for the working class, giving reasons for your decision.

8.14 The emergence of socialism and trade unions

Urbanisation brought with it new social classes and social divisions. Investors (**entrepreneurs**) could earn vast fortunes. Their luxurious lifestyles and homes reflected their new status, a world removed from the poverty-stricken conditions of many of their employees.

Many workers found it hard to adapt to their new lives in the city. Some embittered workers began to demand better conditions and political rights. The result was a rising interest in social revolution, with philosophers and activists such as Karl Marx and Friedrich Engels gaining a following among the working classes.



Source 1 An illustration showing Karl Marx (seated) and Friedrich Engels

In his influential book, *Capital: A Critique of Political Economy* (1867), German philosopher Karl Marx suggested that the Industrial Revolution was driven by an economic system known as **capitalism**. Marx argued that capitalism was based on the exploitation of the workers by the owners of land, factories, railways and roads, shops and banks for profit. For capitalism to work, it relied on an 'army' of urban workers who would work for less than the value of their labour. Later theorists would build on Marx's work to promote alternative systems that they argued would deliver a fairer distribution of wealth.

These ideas were the beginning of **socialism**. They laid the foundations for the **welfare state** (under which the state took responsibility for all its subjects, rich or poor) and also for **communism** (under which the state attempted to abolish ownership of private property).

Luddites

The first violent reaction to the Industrial Revolution occurred in Britain in 1811, when factory owners and manufacturers in Nottingham received threatening letters signed by 'General Ned Ludd and the Army of Redressers'. In protest at wage reductions and job losses caused by the adoption of stocking frames and automated looms in textile mills, former weavers attacked factories, smashed machines and killed the owner of one cotton mill. In response, the British Parliament made it a capital offence (a crime punishable by death) to destroy machines. Twenty-three **Luddites** (as the protestors became known) were executed in 1812 and many more were transported to Australia as punishment.

The Luddites were stamped out, but their actions showed that there was a need for political action that would benefit workers and improve the conditions that they were forced to accept.

Poor Laws and the rise of Chartism

In 1834, the British Parliament attempted to deal with changing social and economic conditions by reforming the 233-year-old Poor Law. The *Poor Law Amendment Act 1834* decreed that any poor or homeless person requiring assistance from the state (except for the old and sick) had to enter a government **workhouse**. These institutions kept people off the streets but often fed their residents poorly, worked them extremely hard and broke up families.

Widespread discontent over the Poor Law Amendment Act reminded many people that they had little say in government. Reform bills in 1832 had extended the right to vote, but only to about 600 000 out of three million men over the age of 21. At this time, all members of parliament were required to own property, which limited the number of men who could afford to stand for office. In 1838, a group of reformists published a People's Charter written as a bill that could be presented to parliament, demanding a better life for people through the use of parliamentary change (see Source 3).

The movement in support of the People's Charter became known as **Chartism**. It spread through Great Britain and in June 1837, Chartists held a general meeting at the British Coffee House in Cockspur Street, London. One faction wanted to use peaceful persuasion while another suggested physical force, even revolt.

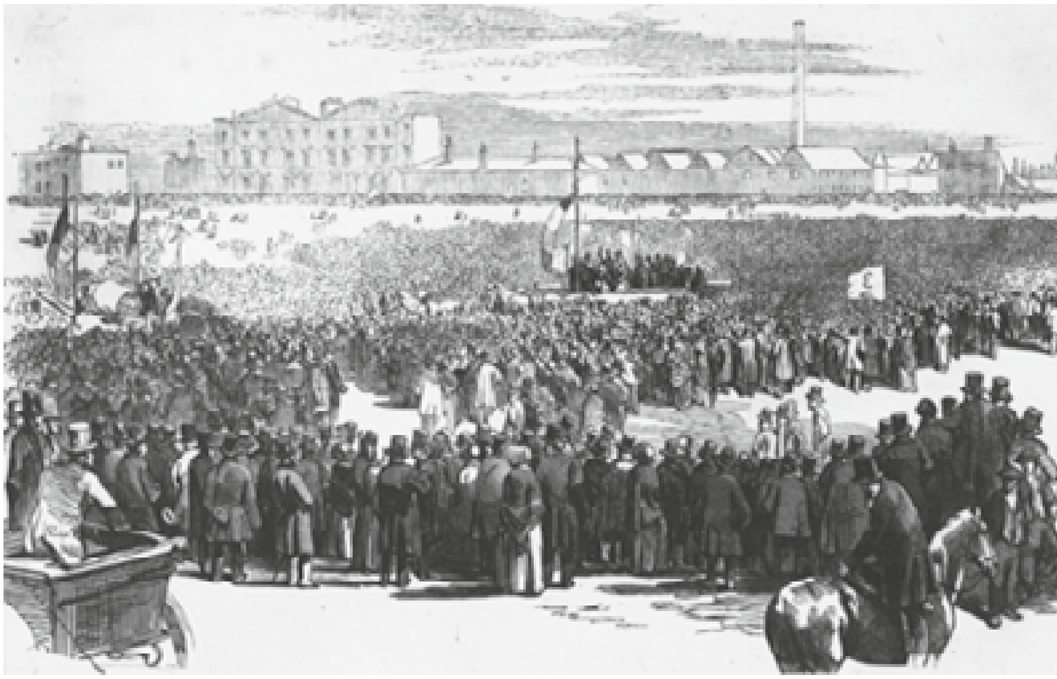
The House of Commons rejected the Chartist petition, even though it had 1.2 million signatures. The Chartists suggested that a general strike be called on 12 August but then called it off. Other groups were involved in destroying factory machinery and in strikes, often clashing with police and soldiers. By 1840, over 500 Chartists had been put in prison.

A second petition was drawn up in 1842 and presented to parliament in May, this time with over three million names. Again it was rejected by parliament. A third petition was drawn up in 1848, when revolutions in Europe encouraged a revival of the Chartist ideas. This petition was signed by two million people but again it was ignored. As a result, many Chartists gave up on Britain and **emigrated** to other countries such as the USA, Italy and Australia.

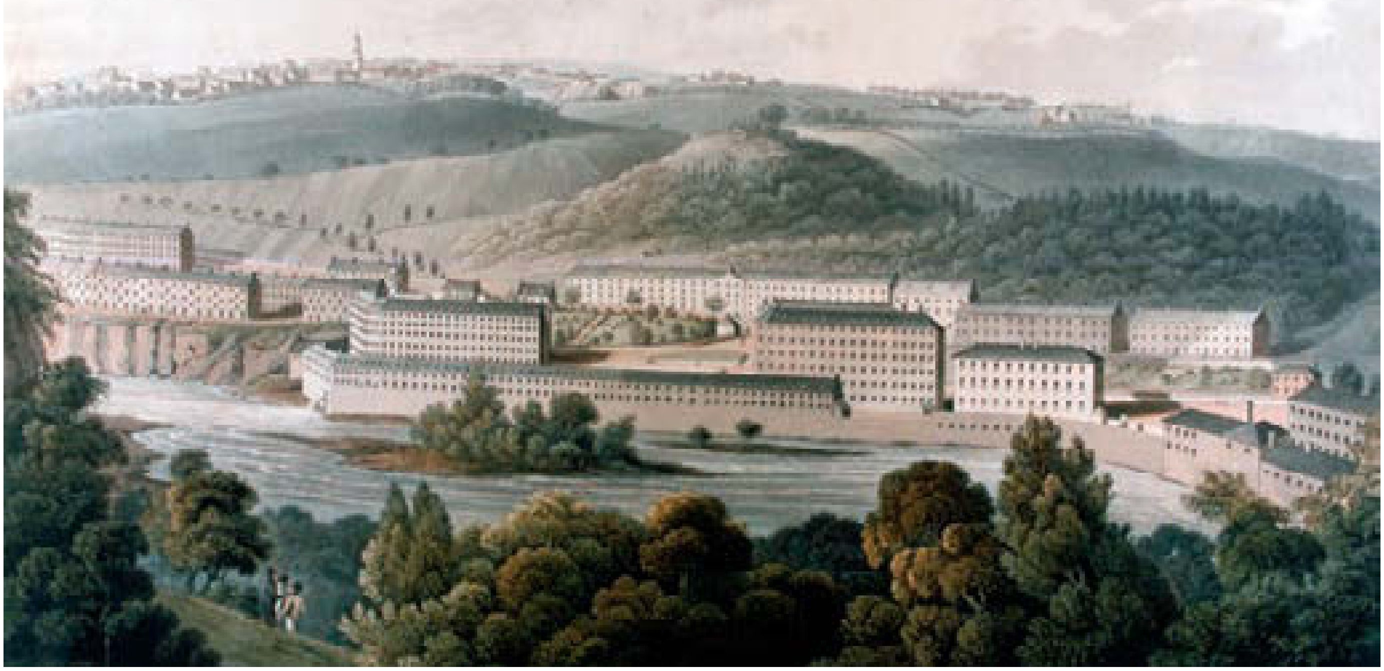
Source 3 The Chartist claims

The six points of the People's Charter

1. A VOTE for every man twenty-one years of age, of sound mind, and not undergoing punishment for crime.
2. THE SECRET BALLOT—To protect the elector in the exercise of his vote.
3. NO PROPERTY QUALIFICATION for members of Parliament—thus enabling the constituencies to return the man of their choice, be he rich or poor.
4. PAYMENT OF MEMBERS, thus enabling an honest tradesman, working man, or other person, to serve a constituency, when taken from his business to attend to the interests of the country.
5. EQUAL CONSTITUENCIES, securing the same amount of representation for the same number of electors, instead of allowing small constituencies to swamp the votes of larger ones.
6. ANNUAL PARLIAMENTS, thus presenting the most effectual check to bribery and intimidation, since though a constituency might be bought once in seven years (even with the ballot), no purse could buy a constituency (under a system of universal suffrage) in each ensuing twelve-month; and since members, when elected for a year only, would not be able to defy and betray their constituents as now.



Source 2 An illustration of a Chartist meeting in 1848



Source 4 An artist's impression of Robert Owen's cotton mill at New Lanark in 1818. Unlike many industrialists at the time, Owen supported the rights of workers at his mills and established one of the largest trade unions.

Emergence of trade unions

Over time, workers found ways of banding together to protect their interests. Skilled workers realised that they needed to protect their jobs and incomes (in case of illness or injury) so they would not become victims of the Poor Laws. As a result, many formed Friendly Societies. Workers each paid a weekly subscription to their Friendly Society that would provide them with a small income during illness, an old-age pension, or money for a funeral when they died.

Some industries developed trade clubs, which quickly developed into unions that fought for common aims, such as higher wages. A union's main weapon against employers and industrialists was the threat of work stoppages known as strikes. The Combination Acts of 1799 and 1800 banned workers in Britain from meeting to demand increased wages or shorter working hours. If caught, the punishment for this crime was three months in jail.

After protests and debate, trade unions were legalised in 1825, swiftly leading to the establishment of groups such as the National Association for the Protection of Labour, with over 100 000 members. The largest union was the Grand National Consolidated Trades Union, established in 1833 by a mill owner, Robert Owen. Unlike many other mill owners, Owen supported the welfare of his workers. He abolished child labour in his mills (for those under the age of 10), and provided schooling and good housing. He also paid good wages, including sick pay.

The Factory Acts

The Factory Acts were inspired by complaints about the employment of child labourers, who worked long days in appalling conditions. In 1802 and 1819, British politician and industrialist Robert Peel was instrumental in passing laws that restricted the hours that children had to work. Unfortunately, many mill owners had influence over local judges, so these laws were not enforced. By 1830, most of the 250 000 mill workers in Britain were still under the age of 18.

In a push to reduce the working day to 10 hours, social reformer Lord Ashley succeeded in making it illegal for children under the age of nine to work at all. Those under 13 could work only a 48-hour week and, those aged 14–18, a 69-hour week. In addition, all children were to receive two hours of schooling per week, and inspectors were appointed to enforce the new rules.

In 1840, the Royal Commission on Children's Employment discovered that women and children were expected to carry loads of coal of up to 150 kilograms either on their shoulders or dragged behind them through narrow, low passages. A Mines Act was passed in 1842, banning all females as well as boys younger than 10 from working underground. Other European countries introduced similar laws: in France in 1841 and in Prussia in 1839, laws limited the working hours of people under the age of 16 and banned the employment of children under nine in mines and factories.

In 1847, women in factories were restricted to a 10-hour day, which effectively reduced many of the men's hours as well. The final major change for this period came in 1874, when a maximum of 56 hours' work a week was introduced – 10 hours a day from Monday to Friday, and six hours on Saturdays.

Emergence of modern lifestyles

Robert Owen was not the only factory owner who came to see that happier workers would work harder. Titus Salt, an industrialist and politician from the English town of Bradford began experimenting with the idea of providing well-built homes with drainage for his employees, as well as a local hospital, public baths, churches and schools.

In France, workers were allowed to gradually buy the cottages in which they lived. These workers' cities also had schools, hospitals and baths. Similar 'cities' were developed in other European nations.

Improving health conditions led to fewer outbreaks of disease and more efficient workers. Even the harshest of mill owners began to clear slums. Cesspools were removed, tenements (overcrowded rooming houses) were pulled down, and open spaces were created for sport and entertainment. Sport was encouraged in 'leisure time' in order to keep workers healthy.

Increased leisure time led to other changes. Mass entertainment, such as theatres and spectator sport, developed alongside newspapers and magazines for people of all classes – not just literature for the well educated.

Compulsory education for children eventually grew into educational opportunities for other workers, with Mechanics' Institutes offering courses in technology and self-improvement. Eventually, these broadened to offer other subjects, including literacy and arithmetic.

Improvements in agricultural production gave people better diets and reduced the risk of famine through crop failure. Workers could now afford more and better food that, in turn, helped them stay even healthier.

Source 5 Young American boys working as mine helpers, *c.* 1900, before the introduction of child labour laws in the USA

Check your learning 8.14

Remember and understand

1 What did Karl Marx think was the driving force behind the Industrial Revolution?

2 Look at the first point of the People's Charter in Source 3. What large group was left out of their demands for voting rights?

3 In your own words define the term 'Luddite'.

4 Prior to 1825, what was the legal punishment if workers gathered to discuss demands for higher wages?

Apply and analyse

5 Read Source 3. In your own words, explain what a 'property qualification' was. Why did the Chartists want to abolish the property qualification for members?

6 Explain how workers benefited from joining Friendly Societies.

Evaluate and create

7 Many people today who avoid using computers or new technology are called 'Luddites'. Given what you have learnt, describe how the original 'Luddites' differ from modern-day 'Luddites'.

8 Create a poster advertising a Chartist meeting. Include the six proposals shown in Source 3 on your poster, ensuring that you explain each proposal in your own words so that they can be understood by young people today.

8.15 Long-term impacts of the Industrial Revolution

Although it is impossible to accurately identify a date on which the Industrial Revolution came to an end, many historians argue that this coincided with the beginning of World War I in 1914. In the century since then, many of the long-term impacts of the Industrial Revolution have started to become apparent. Some of these long-term impacts are positive while others are negative.

Long-term population growth and global inequality

Although rapid population growth was one of the major short-term effects of the Industrial Revolution, in the 100 years since then world population has continued to rise. Today, this growth has slowed in the industrialised nations but continues to increase rapidly in the developing world. In 1801, world population was approximately one billion people. By 2027, this number is estimated to exceed eight billion. Many academics now argue that this number of people is unsustainable and is placing the world's resources at risk from overuse.

In the short term, the advantages brought by the Industrial Revolution – including higher standards of living, education, better food and medical treatment – only benefited the industrialised world. Other areas of the world – such as the colonies of major European powers – were left behind or exploited for their resources. Today, these countries are striving to bring themselves into line with the developed countries and former imperial powers that controlled them in the past.

In many ways, increased levels of global trade have allowed the industrialised world to export many of the problems of the Industrial Revolution – long hours, poor working conditions, child labour – to developing countries.

Source 1 An abandoned 19th-century lead mine

Environmental impacts

One of the most significant long-term impacts of the Industrial Revolution is related to the environment. New sources of air and water pollution were introduced that we are only now beginning to acknowledge as directly linked to 19th-century industrial processes. Coal burnt in the production of steam power produced heavy layers of smog that hung over the factory towns and cities. Evidence of the effects of this pollution was found when modern scientists tested hair samples from famous people such as Isaac Newton and Napoleon Bonaparte. They discovered high concentrations of lead and mercury.

Today, not much has changed. The modern world is still heavily dependent on fossil fuels such as coal and oil. Not only do we use petroleum products in our cars, ships and planes, we also use them in the manufacture of our tablets, smartphones, computers and similar devices. The only difference is that these fuels we burn to maintain our affluent lifestyles are running out.

Air pollution

The British were aware of the soot and dirt that hung over their industrial towns, but they could not foresee the long-term effects of their industry into the 21st century. They did not realise fossil fuels such as coal and oil could run out or have a global environmental impact. The Industrial Revolution left humanity dependent on carbon fuels (such as petrol and gas). In recognition of this, governments worldwide are encouraging the search for greener energies through policies aimed at limiting carbon production or taxing those that produce it.

The developing world and its growing economies, particularly those of India and China, have copied the example of the industrialised nations by becoming large producers of pollution as they strive to improve the living conditions and wealth of their populations (see Source 3).

By the mid-1900s, the effects of these changes to the Earth's atmosphere were becoming apparent. In the 1960s, a new environmental movement sought to stem the tide of pollutants flowing into the planet's ecosystem. It is now widely accepted that pollution has changed the Earth's climate and could lead to further unexpected changes.

Source 2 The effects of industrialisation are seen in scenes such as this, where chemicals from a nearby chemical plant have killed the trees.

Source 3 Today, modern China follows the example set by Britain in the 1800s.

Water pollution and sewage difficulties

The Industrial Revolution led to the building of many factories, tanneries and industrial buildings along the banks of the Thames. Waste from these industries, along with the flow of the London cesspits, badly polluted the river. By 1833, salmon could no longer be found upstream from London Bridge. The Building Acts of 1844 and 1847 improved sanitation in the city *itself,* but only by dumping more sewage into the river.

The river was toxic to fish but was still used to provide drinking water for people. This led to four serious outbreaks of cholera between 1831 and 1866. Pollution continued as the city's population grew and more industries developed. This problem was not resolved until late in the 20th century. The first salmon in 150 years returned to the Thames in 1974.

It was not until the 1960s, long after the Industrial Revolution, that people truly came to recognise the problems caused by industrial waste and ground contamination from new industries. Leftovers from production, by-products and waste were dumped or burned off. Large areas of land were damaged or poisoned by unknown or unrecognised chemicals dumped without any special care or consideration. The run-off from some of these chemicals often entered the water supply. Rivers, creeks and underground water supplies were affected, while dangerous elements such as lead entered the food chain through animals' drinking the water or through infected food.

Source 4 Modern cleaning of the Thames; this device collects floating rubbish, such as plastic and wood.

key**concept:** Significance

'Smellbourne'

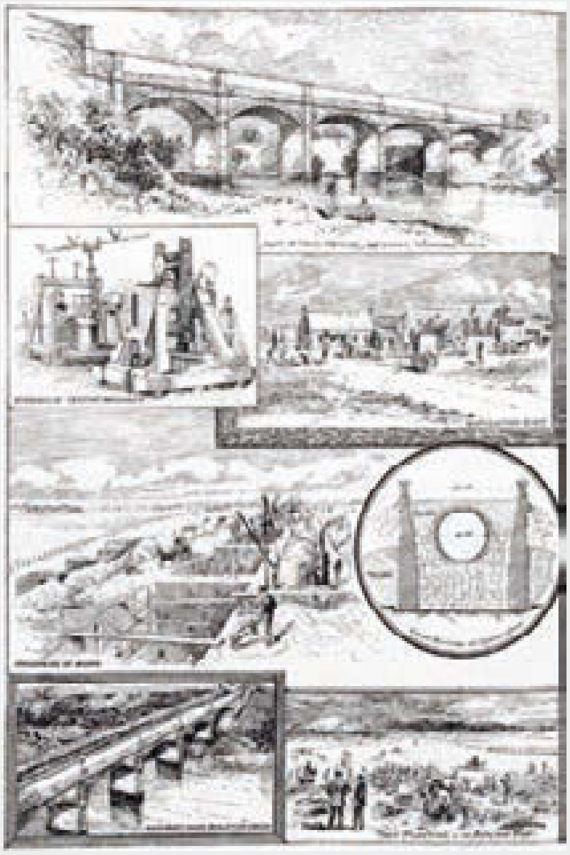
In the 1850s, the majority of sewage and human waste from houses across Melbourne was emptied into open drains that flowed into street channels. This waste mixed with other waste from stables and industries making these open street channels extremely smelly. As a result, Melbourne was given the nickname 'Smellbourne'.

Although there was a collection system (waste products collected from outhouses or 'dunnies' behind city homes by 'nightmen') it was disorganised and often resulted in the outbreak of diseases like typhoid.

After hundreds of people died, the Melbourne and Metropolitan Board of Works (MMBW) was established to build an underground sewerage system and a treatment plant at Werribee. This treatment plant still operates today.

The system was opened in February 1898, when the chairman of the MMBW, Mr Fitzgibbon, proudly stated, it 'was not a question of how much the scheme was going to cost, but how much it was going to save in the lives of the citizens'.

For more information on the key concept of significance, refer to page 209 of 'The history toolkit'.



Source 5 An engraving showing works on the new sewerage scheme for Melbourne, 1892

Source 6 A modern example of the effects of deforestation in Haiti

Deforestation and land clearance

During the Industrial Revolution, forests were cleared to an ever greater extent, at first for fuel and building materials, then to make space for new farmland. A rising population required more buildings; railways required miles of wooden sleepers. Land was also cleared to build the new factories and mills, and to create the housing areas around them where the workers could live. In many cases, the forests lost contained old-growth trees that had stood for decades. These trees had held together soil on mountain slopes or soaked up rainwater. The loss of these trees led to landslides and to floods downstream.

Check your learning 8.15

Remember and understand

1 In what ways did the Industrial Revolution encourage an increase in overall world population?

2 Use the information provided to complete the following tasks:
   - a Why was Melbourne nicknamed 'Smellbourne'?
   - b How did Melbourne resolve its difficulty with sewage?
   - c Why is the Melbourne sewerage system still considered significant to this day?

3 What effect did industrialisation have on waterways such as the Thames?

4 What were the unexpected consequences of the removal of trees from some mountain areas?

Apply and analyse

5 Write a paragraph describing some of the long-term environmental effects of the Industrial Revolution.

6 Explain why the Industrial Revolution did not benefit developing countries such as India.

7 Over the centuries, what has been the relationship between industrialisation and outbreaks of serious diseases and illnesses? Use examples from this text and from your own research to answer this question. Provide examples to support your answer.

Evaluate and create

8 Create a poster that advises people how to limit their pollution of waterways.

9 Write a letter to the newspaper arguing the need to investigate alternative energy sources of industrial and domestic power.

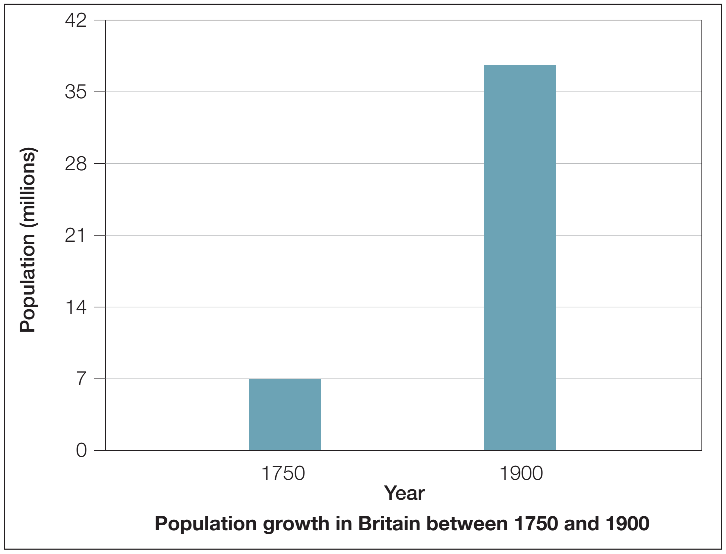
8C rich task

Population growth in Britain during the Industrial Revolution

The Industrial Revolution meant the transformation of countries' populations from being predominantly rural to being predominantly urban. In England, millions of people migrated from farming areas to the cities springing up near the coal and iron fields. The population of Manchester, England, grew from 25 000 in 1772 to 303 000 by 1850. Overall in Britain, the number of cities with populations of 50 000 or more rose from three in 1785 to 31 in 1860. By 1850, Britain had become the first nation in history to have a larger urban than rural population.

Source 1

Britain	1750	1900
Population	7 million	37 million
People living in towns	13%	87%
Life expectancy	Men: 31 years Women: 33 years	Men: 45 years Women: 48 years
Deaths at birth	65%	15%



Source 2 Graph showing population growth in Britain between 1750 and 1900

skill**drill**

Using graphs to communicate historical information

Sometimes, complicated numerical information presented in writing or in tables can be difficult to understand. Historians need to be able to read and interpret this information and communicate it visually. Graphs can be a very effective communication form for historians. They can condense information, make a point clearly and concisely, and show relationships and trends visually.

Bar graphs are very useful for showing how something has changed over time. Use the following steps when constructing a bar graph:

Step 1 Decide upon a title for the bar graph. The title should say what the graph is about in a very specific and concise way. For example, when graphing the information in the first row of the table in Source 1, the title 'Population of Britain between 1750 and 1900' is more specific than the title 'Population of Britain', or the title 'Population between 1750 and 1900'. It is also more concise than the title 'The changing population of Britain between the years 1750 and 1900'.

Step 2 Determine the labels for the *x*-axis (the horizontal axis). The *x*-axis is usually used to show items, categories or time periods. To determine the labels, you need to consider the data you are using to make your graph. For example, when graphing the information in the first row of the table in Source 1, we have put two labels on the *x*-axis: 1750 and 1900.

Step 3 Draw the *x*-axis and mark where the bars will be.

Step 4 Determine the scale for the *y*-axis (the vertical axis). The *y*-axis is usually used to show the frequency of something happening or the amount. Again, you need to consider the data you are using to make your graph. (For example, when graphing the information in the first row of the table in Source 1, we have used a numerical scale which goes from zero to 37 million). You then need to choose an appropriate scale interval (e.g. 1 cm = 10 million).

Step 5 Draw the *y*-axis and mark your chosen intervals with the appropriate numerical labels (e.g. 10 million, 20 million).

Step 6 Write an appropriate *y*-axis title beside the *y*-axis and an appropriate *x*-axis title underneath the *x*-axis. For example, when graphing the information in the first row of the table in Source 1, the *y*-axis title is 'Population' and the *x*-axis title is 'Year'.

Step 7 After looking closely at your data, draw each bar. If the value falls between two of your marked intervals on the *y*-axis, approximate where the correct value would lie.

Step 8 Each graph should be uniquely numbered, for example, 'Figure 1'. (Note that all other images such as diagrams, pictures, photos and maps are also included in this numbering series.)

Step 9 Whether creating your own graph using another source's data, adapting their graph, or reproducing their graph as a whole, you must quote (cite) the source. Place the citation below the graph, and precede it by either 'Source:' (for an exact reproduction) or 'Data source:' (when you have modified the original).

Apply the skill

Using the information in Source 1, follow the steps outlined to create three bar graphs in your notebook that show:

1 the difference in life expectancy of men and women in Britain in 1750 and 1900
2 the difference in the number of babies that died at birth in 1750 compared to 1900
3 how many more people were living in towns in 1900 compared to 1750.

Extend your understanding

1 Conduct some independent Internet research to find out why populations increased so rapidly during the Industrial Revolution, both generally and within cities. Using the information you have gathered, write a 200-word historical explanation describing the population boom and the reasons why it occurred.

Source 3 Manchester's population grew rapidly between 1772 and 1850.

Depth Study 2: Investigating World War I

World War I (1914–1918)

World War I is often called ‘the Great War’, ‘the first modern war’ or ‘the war to end all wars’. It was the first war in which modern machine guns, chemical weapons, tanks, fighter aircraft and submarines were used to cause devastation on a global scale. Regardless of what it is called, the events of World War I destroyed entire cities and towns and took the lives of millions of soldiers and civilians.

At the end of World War I, the map of Europe was redrawn. Once-powerful empires were broken up and new nations were created in their place. The war also tested Australia’s commitment to Great Britain. Although Australia displayed a strong sense of loyalty to Britain by committing troops and resources, the Australian public was divided over the issue of conscription.

Today, the sacrifice of those who fought and died in World War I is commemorated in many nations around the world – including Australia.

9A

What were the causes of World War I?

1 There were several short-term and long-term factors that led to the outbreak of World War I in 1914. Make some predictions about what some of these might have been.

9B

How and where was World War I fought?

1 During World War I, there were major developments in warfare and weaponry. Much of this new technology was blamed for extending the war. Why do you think this might have been?

chapter 9

Source 1 Trench warfare was a major part of the fighting that took place across Europe during World War I. This photograph shows the remains of a fallen soldier photographed in the trenches during World War I. It illustrates the horror of daily life in the trenches for soldiers on both sides.

9C

What impact did World War I have on Australia?

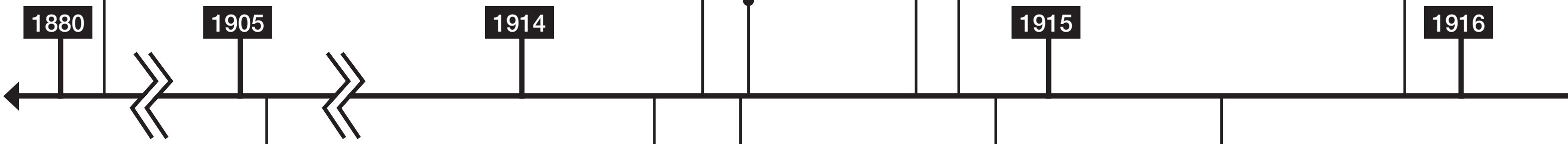
1 World War I had a significant impact on people at home in Australia, especially for women and people of German background. Explain why and how the war might have affected these two groups of people in particular.

9D

How is World War I remembered and commemorated?

1 It has been argued that wars are essential to a nation's development and sense of national identity. Do you believe this is true? Discuss your ideas as a class, making reference to the way in which World War I is commemorated each year.

9.1 World War I: a timeline



1882
the Triple Alliance is formed between Germany, Italy and Austria–Hungary

1907
the Triple Entente is formed between Britain, France and Russia

28 June 1914
Archduke Franz Ferdinand (heir to the Austro–Hungarian throne) and his wife are assassinated in Sarajevo, Bosnia–Herzegovina

Franz Ferdinand, Archduke of Austria

28 July 1914
Austria–Hungary declares war on Serbia

1–4 August 1914
Germany declares war on Russia and France, and invades neutral Luxembourg and Belgium. World War I begins.

4 August 1914
Britain declares war on Germany

5–10 September 1914
French and British armies halt the Germans in Belgium and France

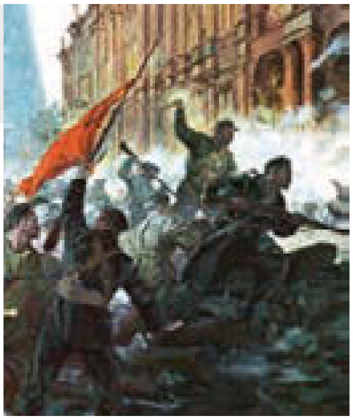
15 September 1914
trench warfare on the Western Front begins

29 October 1914
Turkey enters the war on the side of Germany

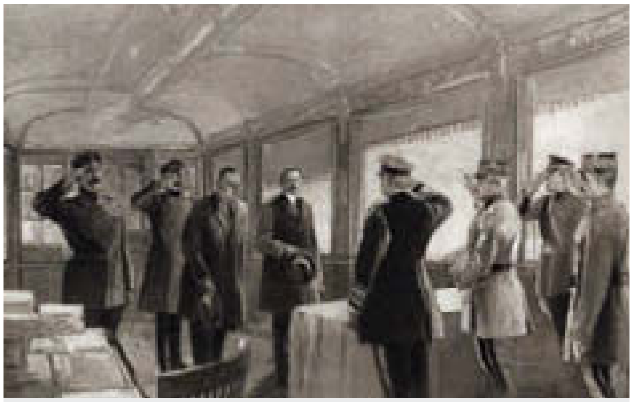
25 April 1915
the Anzacs land at Gallipoli

Australian soldiers at Gallipoli

December 1915
the Anzacs withdraw from Gallipoli



A key moment in the Russian Revolution; the storming of the Winter Palace in 1917



The signing of the Armistice between the Allies and Germany in a railway carriage in the French forest of Compiègne on 11 November 1918

March 1916
the Australian Imperial Force (AIF) joins the fight against Germany on the Western Front

July–November 1916
the Battle of the Somme; tanks are used for the first time

28 October 1916
the first referendum on conscription is held in Australia

1917

1917
Fighting continues on the Western Front. Battles are fought at Passchendaele, Ypres, Pozières and Bullecourt.

April 1917
the USA enters the war

October 1917
Communist revolution in Russia

1918

March 1918
the Ludendorff Offensive begins – a final attempt by Germany to break through the Allied lines and win the war

April 1918
Australian troops recapture the town of Villers-Bretonneux in France – costing the lives of around 1200 Australian troops.

July 1918
the Battle of Le Hamel

8 August 1918
the Battle of Amiens begins; this day will later come to be known as the 'Black Day for the German Army'

11 November 1918
the Armistice (ceasefire) is signed; World War I ends

1919

January–June 1919
the Paris Peace Conference is held to decide the fate of Germany; the Treaty of Versailles is drawn up

Check your learning 9.1

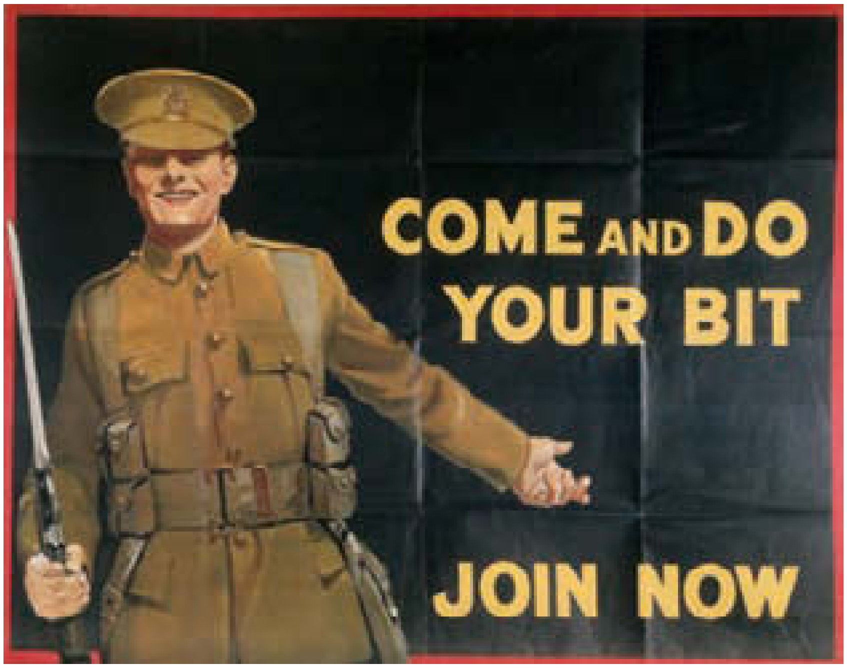
Remember and understand

1 When did Britain declare war on Germany?
2 When did the USA enter the war?
3 On what day did World War I end?

Apply and analyse

4 Using the timeline, calculate how long the Gallipoli campaign lasted.
5 Conduct some research to discover why 8 August 1918 became known as the 'Black Day for the German Army'.

9.2 Background to World War I



Source 1 An English recruitment poster from World War I

The outbreak of World War I in 1914 was the result of a complex interaction of tensions that had been building between countries in Europe for more than 20 years. National rivalries, jealousies over territory, competition over economic progress, competition over the size of armies and navies, and the race to colonise new parts of the world all contributed to the tension.

The last major war in Europe (the Franco–Prussian War) was fought between France and a number of independent German kingdoms. The war ended in 1871 when the French were defeated. As a result of their victory, the German states unified to form the German Empire (Germany). After unification, Germany attempted to limit France's power and secure its place in European politics by developing a system of alliances with other countries across Europe. This system changed the way in which many European countries interacted with each other and resulted in the development of two major alliances. All of the most powerful European countries belonged to one or the other of these alliances. These countries believed that their alliances would act as a deterrent to war because if a member of one alliance was attacked by a member of the other alliance, all the members of both alliances would have to become involved. This became known as 'balance of power' politics.

Europe in the lead-up to war

In 1901, the situation in Europe appeared peaceful. Queen Victoria had occupied the British throne for over 60 years and many of her relations and descendants had married into royal houses all over Europe (see Source 2). As a result, many of the royal families of Europe were closely related. Tsar Nicholas II of Russia, Kaiser Wilhelm of Germany and King George V were all first cousins (see Source 3). The wife of Tsar Nicholas II was also one of Queen Victoria's granddaughters.

In the lead-up to World War I, it seemed unlikely that close relations would become involved in armed conflict – let alone fight on opposing sides.

Europe seemed prosperous during this time. The Industrial Revolution had transformed Western Europe, with new production methods and advances in technology affecting almost every sector of society. Governments had made improvements in health care, sanitation and assistance for the poor. Roads, canals and railways were making trade and transport cheaper and more accessible. Literacy levels were also rising. On the whole, members of the middle classes across Europe had fought for greater political rights and now enjoyed a higher standard of living. The working classes had also won some basic rights, such as the right to vote in Britain after 1867.

However, this prosperity masked both international and domestic tensions. Despite their close family ties and relationships, there were jealousies among many of the royal families in Europe. Issues such as the different rates of economic progress, the size of colonial empires and the development of weapons, armies and ships all caused rivalry between major European nations.

For example, the rate of economic progress and improvements in the standard of living were unevenly spread across Europe. The Industrial Revolution of the 18th and 19th centuries led to many advances in Britain and Germany, but had little impact on the nations of Eastern Europe such as Austria–Hungary, the Balkan states and Russia. This contributed further to the rivalry between nations. Even in industrialised nations like Britain and Germany there was a huge gap between rich and poor. Many working-class families lived in cramped, unsanitary conditions or in urban slums. Women were still not allowed to vote in Europe, and new political movements divided people along class and ethnic lines. Many governments and people were afraid of the rising influence of radical political movements like socialism and **anarchism**.

So although Europe seemed to be peaceful before World War I, these rivalries and tensions bubbled away beneath the surface.

Source 2 Queen Victoria (seated front centre) photographed with members of her extended family in 1894. Kaiser Wilhelm II of Germany is seated front left.

Source 3 Tsar Nicholas II of Russia (left) with his cousin King George V of England (right) – their mothers were sisters

Check your learning 9.2

Remember and understand

1 Which country was responsible for developing a system of alliances in the 1870s?

2 Why did European countries at the time believe that these alliances would help to prevent war?

3 Explain how it was that so many of Europe's royal families were related.

Apply and analyse

4 How would you summarise the social and political situation in Europe around 1900? Explain your answer.

Evaluate and create

5 Conduct some research into the meanings of socialism and anarchism. Why do you think governments in the early 1900s would have been afraid of the growing influence of these movements?

9.3 Causes of World War I

There were four main factors that contributed to the growing tensions between European countries in the lead-up, to World War I including:

- the alliance system
- nationalism
- imperialism
- militarism.

The alliance system

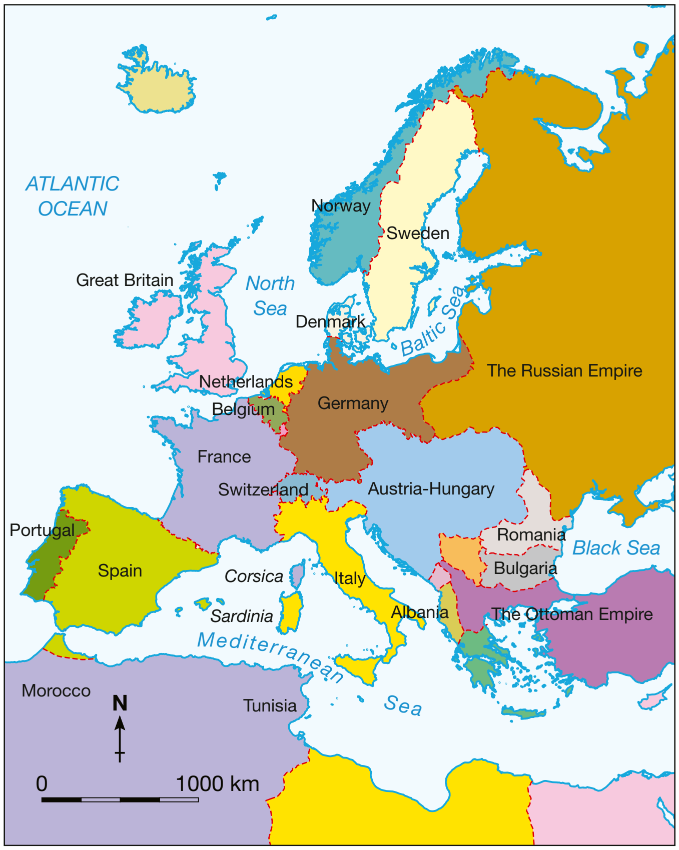
One of the key factors that led to the outbreak of World War I was the **alliance system**. From the 1870s onwards, Europe's leading nations grouped themselves into two alliances. Over time, these alliances became more formal and legally binding. In 1882, the **Triple Alliance** was formed between the countries of Germany, Austria–Hungary and Italy. In 1907, the **Triple Entente** was formed between the countries of Britain, France and Russia (see Source 2). *Entente* is a French word meaning an 'understanding' or 'alliance'. By joining one of these alliances, each participating nation promised to provide military support if one of its members was attacked by a member of the opposing alliance.

Ironically, one of the main goals of the alliance system was actually to prevent the outbreak of war. It was assumed that no single country would go to war against another if there was a risk that a small conflict between two nations could easily build into a large conflict between many countries.

Unfortunately, the alliance system had the opposite effect (see Source 3) and over time these alliances increased the tension between Triple Alliance and Triple Entente countries.

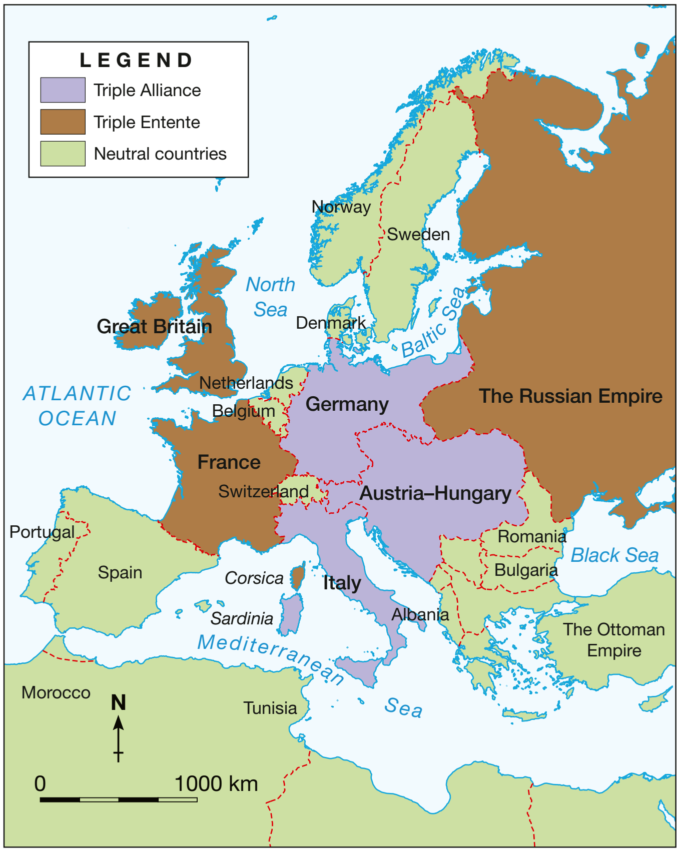
In addition to the key countries shown in Source 2, many other countries, colonies and territories around the world were drawn into the alliance system (see Source 3).

EUROPE: BEFORE THE OUTBREAK OF WORLD WAR I

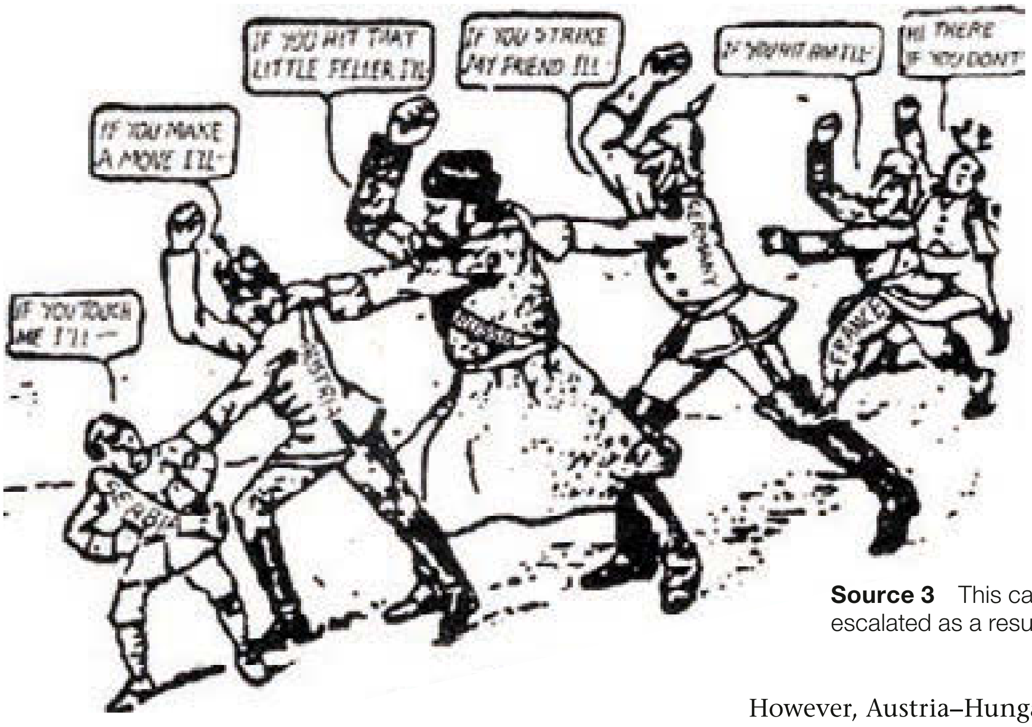

ATLANTIC OCEAN
Norway
Sweden
Great Britain
North Sea
Denmark
Baltic Sea
The Russian Empire
Netherlands
Belgium
Germany
France
Switzerland
Austria-Hungary
Portugal
Romania
Black Sea
Spain
Corsica
Italy
Bulgaria
Sardinia
Albania
The Ottoman Empire
Mediterranean Sea
Morocco
N
Tunisia
0
1000 km

Source 1 Source: Oxford University Press

EUROPE: DEVELOPMENT OF ALLIANCES 1879–1907


LEGEND
Triple Alliance
Triple Entente
Neutral countries
Norway
Sweden
North Sea
Great Britain
Denmark
Baltic Sea
ATLANTIC OCEAN
Netherlands
Belgium
Germany
The Russian Empire
France
Switzerland
Austria–Hungary
Portugal
Romania
Black Sea
Spain
Corsica
Italy
Bulgaria
Sardinia
Albania
The Ottoman Empire
Mediterranean Sea
Morocco
N
Tunisia
0
1000 km

Source 2 Source: Oxford University Press


IF YOU TOUCH ME I'LL —
IF YOU MAKE A MOVE I'LL–
IF YOU HIT THAT LITTLE FELLER I'LL
IF YOU STRIKE MY FRIEND I'LL–
IF YOU HIT HIM I'LL–
HI THERE IF YOU DON'T
SERBIA
AUSTRIA
RUSSIA
GERMANY
FRANCE

Source 3 This cartoon illustrates how World War I escalated as a result of the alliance system.

For example, all British colonies (such as India) and dominions (such as Australia and New Zealand) automatically became part of the Triple Entente. Japan had signed a treaty with Britain in 1902 that also meant that they could all be drawn into war if a conflict broke out in Europe. Bosnia–Herzegovina was also considered a member of the Triple Entente because Russia was a key supporter of Bosnia–Herzegovina's bid for independence from Austria–Hungary. A conflict between Bosnia–Herzegovina and Austria–Hungary would therefore become a conflict between all the countries that were members of the two alliances.

Nationalism

Nationalism was another important factor that contributed to the outbreak of war in 1914. Put simply, nationalism is a sense of pride in, and a love of, one's nation. Nationalism grows out of an understanding of common goals and beliefs between the people of a nation – for example, a shared language, culture and history. In Europe, nationalism played an important role in the lead-up to World War I.

Nationalism can either unite or divide the people of a nation or region. For example, feelings of nationalism contributed to the unification of many small German kingdom states to form the German Empire (Germany) in 1871. A sense of nationalism also encouraged cooperation between Germany and Austria–Hungary, because German-language speakers ruled both empires.

However, Austria–Hungary was not only made up of people who thought of themselves as Germans and spoke the German language; it was also made up of many other ethnic and language groups, such as Hungarians, Serbians and Bosnians.

From around 1900 onwards, a number of ethnic groups began fighting for independence from Austria–Hungary. One region attempting to assert its independence was Bosnia–Herzegovina, an area in south-eastern Europe known as the Balkans (see Source 2 on page 298). In the years before World War I, Bosnia–Herzegovina was under the control of Austria–Hungary. However, Bosnia–Herzegovina was made up of many different ethnic groups, including Bosnians, Serbs and Croats, who did not see themselves as historically, ethnically or culturally linked to either Austria or Hungary. Instead, most of the people of Bosnia–Herzegovina wanted to join with Serbia to form their own nation.

Russia had been supporting moves by Bosnia–Herzegovina to become independent and unite with Serbia, so when a Serbian youth was accused of assassinating Archduke Franz Ferdinand of Austria in 1914, Russia was drawn into the conflict that followed.

Imperialism

Another factor that led to tensions between European countries in the lead-up to World War I was imperialism. Imperialism is a policy by which a country increases its power by gaining control over new territories to create an empire. This is usually carried out for financial and strategic reasons.

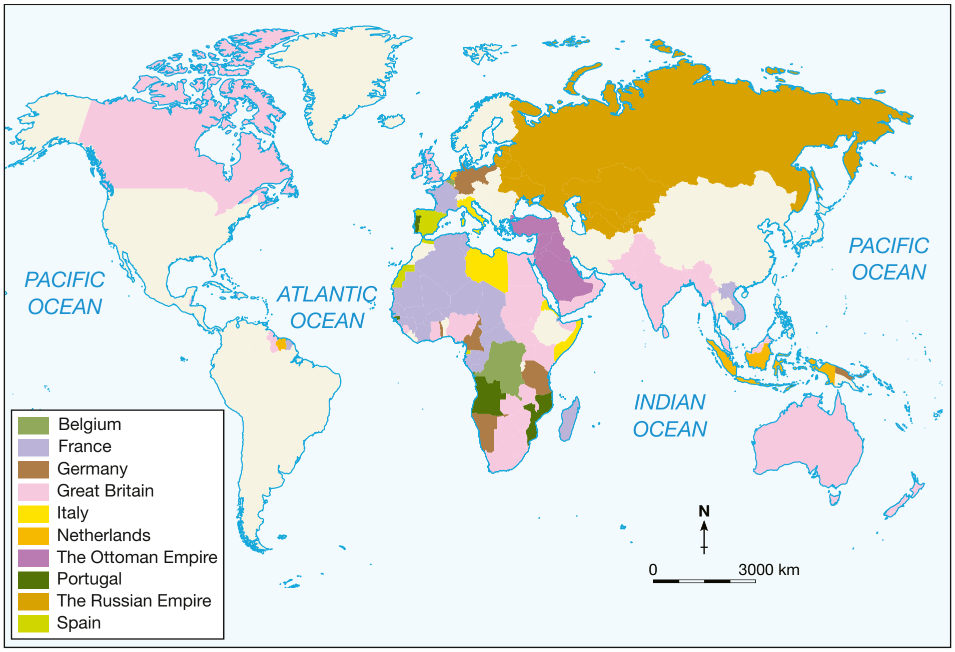
European powers, such as Britain, Spain, France and Portugal had been building empires around the world since the 15th century. Since that time they had claimed new territories and colonised much of North and South America, Australia and parts of Asia (see Source 4). By the late 19th century, European nations were engaged in a new wave of imperialism. This time, they competed to be the first to claim new territories across Africa. Historians often refer to this period as the 'scramble for Africa'.

The main rivals in the race for new colonies in Africa were Britain, France and Germany. At this time, Britain had the largest empire, with colonies and **dominions** (such as Australia) all over the world. France also had many colonies around the world. Germany, however, had only been a unified nation since 1871 and was still trying to build a large colonial empire in order to compete with France and Britain. In 1905, and again in 1911, Kaiser Wilhelm (William) II, the ruler of Germany, attempted to block further colonial expansion by France. He did this by sending German troops to take control of a number of French colonies in North Africa. In both cases, France, with Britain's support, resisted Germany's attacks, resulting in the defeat of Germany. Once again, these events escalated the tension between major European powers.

Militarism

Militarism is the belief that all nations should build and maintain strong armed forces so that they are prepared to defend themselves against attack or promote their national interests. In the lead-up to World War I, many European countries competed with each other not only over the size of their empires, but also over the size of their armies. Between 1870 and 1914,

WORLD: EUROPEAN EMPIRES BY 1914



Source 4

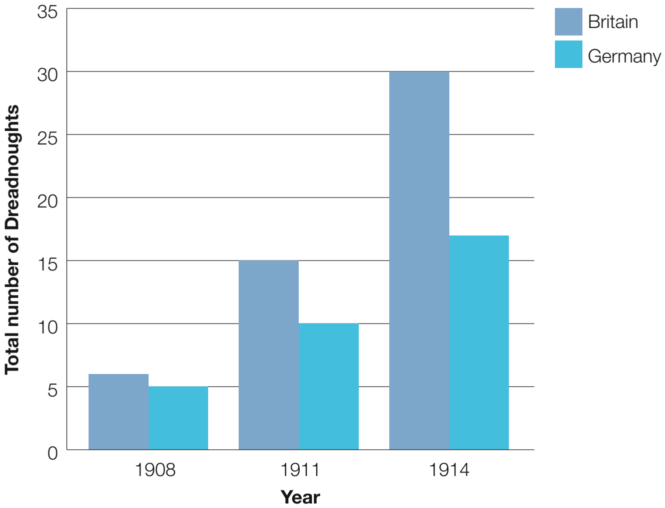
Source: Oxford University Press

Source 5 Military spending and soldier numbers of key European powers, 1913–14

Country	Size of population (millions)	Military spending (US$ millions)	Soldier numbers (millions)
Germany	67	60	8.25
Britain	45.8	50	0.75
France	39.6	40	1.5
Austria–Hungary	52.8	22.5	0.65
Russia	139	15.5	1.25
Italy	35.5	10	0.75

military spending in many European countries increased on average by about 300 per cent. After 1871, all the major European nations except Britain also introduced conscription, which meant that all men over the age of 18 were forced to serve a minimum period in the armed forces such as the army or navy.

By 1900, Britain had developed the largest and strongest navy in the world. It needed a navy of this size to administer and control its huge overseas empire. When Germany started to build up its own navy, Britain became suspicious. Germany and Britain began competing over who could build the most 'Dreadnoughts' – a very fast, powerful and heavily armoured battleship (see Source 7). By early 1914, even though the leaders of Europe were still talking of peace, they were clearly involved in an arms race and were preparing for war..



Source 6 Graph comparing the growth in numbers of Dreadnoughts held by the British and German navies in the lead-up to World War I

Source 7 A picture taken of the Royal Navy's HMS *Dreadnought*. It made such an impact when introduced in 1906 that all battleships built after that time became known as 'Dreadnoughts'.

Check your learning 9.3

Remember and understand

1 Define the following terms in your own words:
  a imperialism
  b nationalism
  c the alliance system.
2 What were the two major alliances formed before World War I? Which countries were the members of the two alliances?
3 Why was Germany's colonial empire so much smaller than Britain's in the lead-up to World War I?

Apply and analyse

4 Using Sources 5 and 6, explain what is meant by the term 'arms race'. Explain the possible reasons why major European powers began to increase the size of their armed forces between 1900 and 1914.

Evaluate and create

5 Do you think an arms race necessarily means that war is likely? Give reasons for your answer.

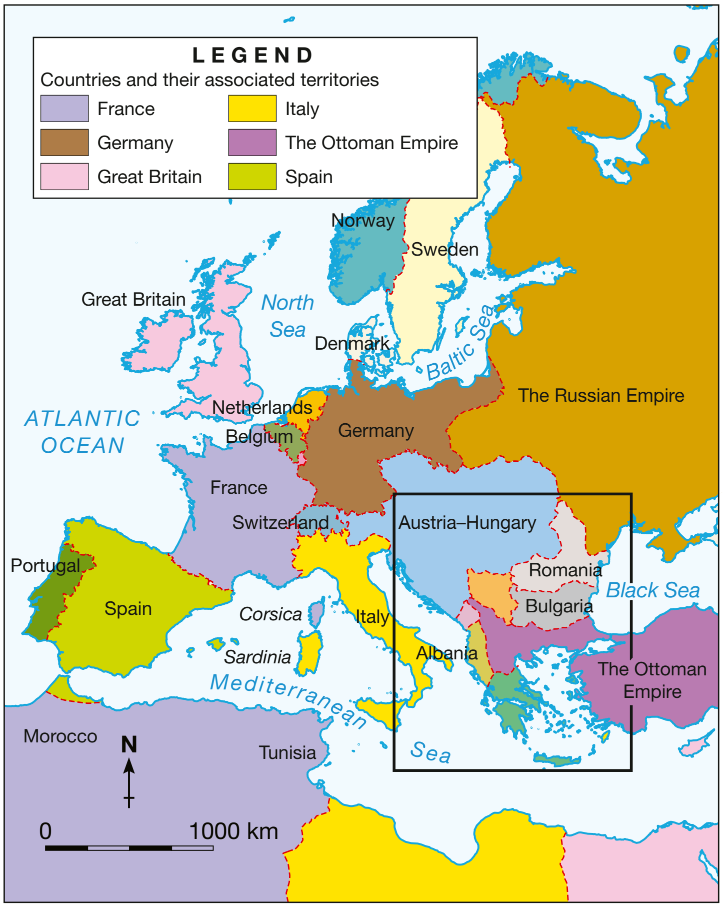
9.4 The outbreak of World War I

The event that finally triggered the outbreak of World War I in 1914 took place in the Balkan states. The Balkans is an area of south-eastern Europe made up of countries such as Romania, Serbia, Greece, Bosnia and Herzegovina, and Bulgaria (see Source 2). The Balkan states were politically very unstable in the lead-up to World War I. Three major imperial powers were actively involved in the region: Austria–Hungary, the Russian Empire and the Ottoman (Turkish) Empire.

The complex relationships between these powers made the Balkans a potential crisis point. Austria–Hungary controlled parts of the Balkans. In 1908 Austria–Hungary annexed (took control of) Bosnia–Herzegovina. Different ethnic groups in Bosnia–Herzegovina, such as the Serbs, did not see themselves as either Austrian or Hungarian and wanted to join together to form their own nation. They began a nationalist movement and began protesting to achieve independence from Austria–Hungary. The Russian Empire supported the Serbian nationalists because they wanted Bosnia–Herzegovina to become part of Serbia.

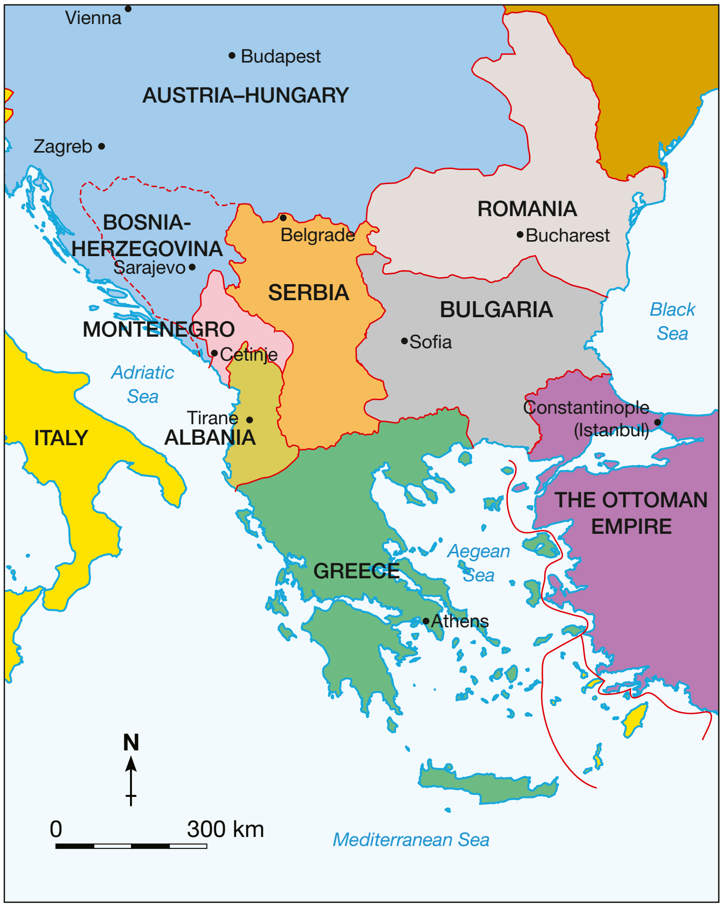
The emperor of Austria–Hungary was aware of this growing tension in the Balkans. Believing that the people of Bosnia–Herzegovina would be charmed and won over by a royal visit, he sent his nephew, Archduke Franz Ferdinand, and the Archduke's wife Sophie, on a goodwill visit to the city of Sarajevo. On 28 June 1914, while many people lined the streets to welcome the royal couple, a Serb nationalist by the name of Gavrilo Princip took the opportunity to show his feelings towards their imperial rulers. During the parade, he shot and killed the Archduke and his wife (see Source 3).

EUROPE: 1914

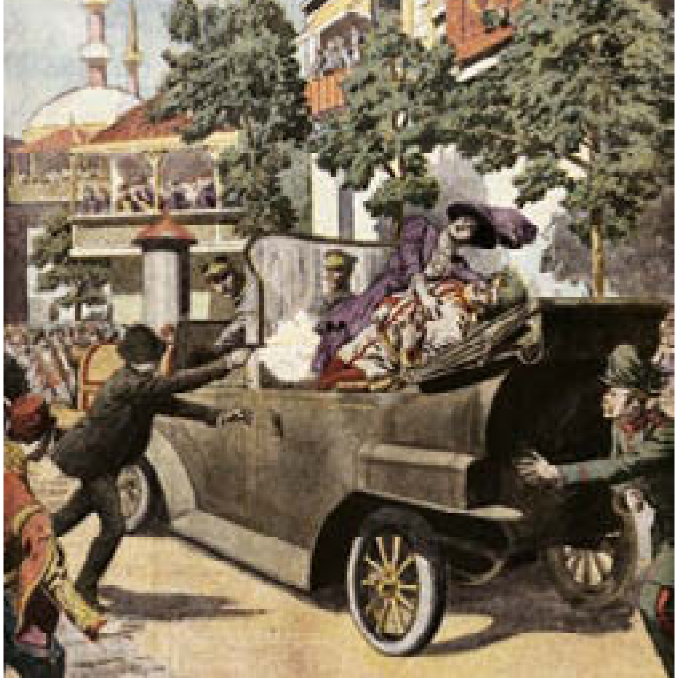

LEGEND
Countries and their associated territories
France
Italy
Germany
The Ottoman Empire
Great Britain
Spain
Norway
Sweden
Great Britain
North Sea
Denmark
Baltic Sea
The Russian Empire
ATLANTIC OCEAN
Netherlands
Belgium
Germany
France
Switzerland
Austria–Hungary
Romania
Black Sea
Portugal
Spain
Corsica
Italy
Bulgaria
Sardinia
Albania
The Ottoman Empire
Mediterranean Sea
Morocco
N
Tunisia
0
1000 km

Source 1 Source: Oxford University Press

DETAIL OF THE BALKAN STATES IN 1914


Vienna
Budapest
AUSTRIA–HUNGARY
Zagreb
BOSNIA-HERZEGOVINA
Belgrade
ROMANIA
Bucharest
Sarajevo
SERBIA
BULGARIA
Black Sea
MONTENEGRO
Cetinje
Sofia
Adriatic Sea
Tirane
ALBANIA
ITALY
Constantinople (Istanbul)
THE OTTOMAN EMPIRE
Aegean Sea
GREECE
Athens
N
0
300 km
Mediterranean Sea

Source 2 Source: Oxford University Press



Source 3 An artist's impression of the assassination of the Archduke Franz Ferdinand and his wife in Sarajevo

The 'July Crisis' and declarations of war

From that point on, the results of a single event in the Balkan region of south-eastern Europe escalated into a European war. The key to the spread of the conflict was the complex alliance system that developed in Europe between the 1870s and 1907.

Immediately after the **assassination**, Austria–Hungary blamed the government of neighbouring Serbia. The following month was a confusing and frantic period of bluff, threats and negotiations between key European powers that became known as the 'July Crisis'. The Austrians issued a series of 10 harsh demands to Serbia. Serbia agreed to nine of the demands, but to accept all would have meant that Serbia lost any real independence, so negotiations broke down.

Exactly one month after the assassination, Austria–Hungary declared war on Serbia. The next day, Serbia turned to its ally Russia for support. Russia was also a Slavic nation and promised to protect Serbia against Austria–Hungary and its ally in the Triple Alliance, Germany. Russia then began preparing its army for war. On 31 July, Germany demanded that Russia stop these preparations. When Russia did not respond, Germany declared war. At the same time, the Germans also asked the French government what its intentions were. France issued a vague response, stating that it would 'follow its own interests'. In reality though, France was obligated to support its ally Russia as both were members of the Triple Entente.

The Schlieffen Plan and the invasion of Belgium

At this point, Germany was faced with hostile forces preparing for war on both its eastern and western borders. This was a threat that Germany had feared ever since France and Russia became members of the Triple Entente in 1907. The German response was to use a special military plan devised by a military strategist called Alfred von Schlieffen. It became known as the Schlieffen Plan. The Schlieffen Plan called for German troops to launch an all-out attack on France by passing through neutral Belgium. The aim was that the French forces could be defeated before the huge Russian army was ready to go to war. That way, Germany would not have to fight France and Russia at once. Instead, with France defeated, it was thought that Germany could concentrate solely on fighting Russia. The Schlieffen Plan was based on the following assumptions:

- Russia would take at least six weeks to get its army ready for war.
- France would be easily defeated in six weeks.
- Belgium would not resist any German attack.
- Britain would remain neutral.

The main problem with the Schlieffen Plan was that it violated Belgium's neutrality. Britain had signed a treaty with Belgium in 1839 guaranteeing to come to its defence if another country attempted to invade its borders. As a result, the German invasion of Belgium forced Britain to become involved in the growing conflict.

Source 4

Key dates in the lead-up to World War I	
28 June 1914	Archduke Franz Ferdinand is assassinated.
23 July 1914	Austria–Hungary presents 10 demands to Serbia.
25 July 1914	Serbia agrees to only nine of the 10 demands.
28 July 1914	Austria–Hungary declares war on Serbia.
29 July 1914	Russia promises support for Serbia.
1 August 1914	Germany declares war on Russia.
3 August 1914	Germany declares war on France and invades Belgium.
4 August 1914	Britain declares war on Germany (Australia becomes involved).
6 August 1914	Austria–Hungary declares war on Russia.
23 August 1914	Japan (an ally of Britain) declares war on Germany.
29 October 1914	Turkey enters the war on the side of Germany.
23 May 1915	Italy enters the war on the side of the Triple Entente.

The war escalates

On 3 August 1914, British Prime Minister Herbert Asquith and Foreign Secretary Sir Edward Grey sent a message to the German government announcing that Britain would declare war if Germany did not withdraw its troops from Belgium by midnight. There was no response to the message, so on 4 August 1914, Britain and its empire found itself at war with Germany.

Italy was also a member of the Triple Alliance with Germany and Austria–Hungary. It was expected that Italy would join the war on their side. However, under the wording of the Triple Alliance, members were not to support each other if one had been the aggressor. Italy used this clause to remain neutral at the start of the war and to switch to the Triple Entente in May 1915.

Turkey entered the war on the side of the Triple Alliance in October 1914. It was against Turkey that Australia's first land battles took place. The USA also came into the war, on the side of the Triple Entente (or Allies), in April 1917 after German submarine attacks on passenger ships resulted in the deaths of hundreds of American civilians.

key**concept:** Contestability

The Schlieffen Plan

Historical events can become contestable with the release of new sources of information. The Schlieffen Plan is a good example of this because it has become the accepted explanation of German tactics in 1914. More recently, however, historians like Terence Zuber have used material released from German archives after the fall of the Berlin Wall to challenge this view. They argue that the 1905 Schlieffen Plan was not a practical war plan, but actually a theoretical training exercise. This argument is based on inconsistencies between the 1905 Schlieffen Plan and the German mobilisation plans implemented in 1914.

Zuber points out that the Schlieffen Plan was for a war against France on a single front, yet in 1914 Germany was planning for a war against France and Russia. The actual document outlining the Schlieffen Plan was also in the possession of Alfred von Schlieffen's daughters in 1914, rather than with the military.

Historians have to be prepared to accept the emergence of new evidence that challenges accepted beliefs. The Schlieffen Plan has long been accepted as fact, but as Zuber argues, it can now be regarded as contestable.

For more information on the key concept of contestability, refer to page 210 of 'The history toolkit'.

Check your learning 9.4

Remember and understand

1. Which European power took control over Bosnia–Herzegovina in 1908?
2. Which Balkan state believed that Bosnia–Herzegovina should break away from Austria–Hungary and join it? Why did Russia support this move?
3. Why did Archduke Franz Ferdinand and his wife tour Sarajevo?
4. Why did Serbia refuse to comply with the last of 10 demands issued by Austria–Hungary after the assassination?
5. What was the event that involved Britain in the war in Europe?

Apply and analyse

6. Explain why there is now historical debate surrounding the importance of the Schlieffen Plan in understanding Germany's actions at the start of World War I?

Evaluate and create

7. Use the information provided to construct a flow chart that clearly explains the key events that lead to the outbreak of World War I in 1914.
8. Using the Internet conduct research about the difference between the 1905 Schlieffen Plan and the plans used by Germany in 1914. Put this information into a table to compare the two plans.

9.5 Australia's entry into World War I

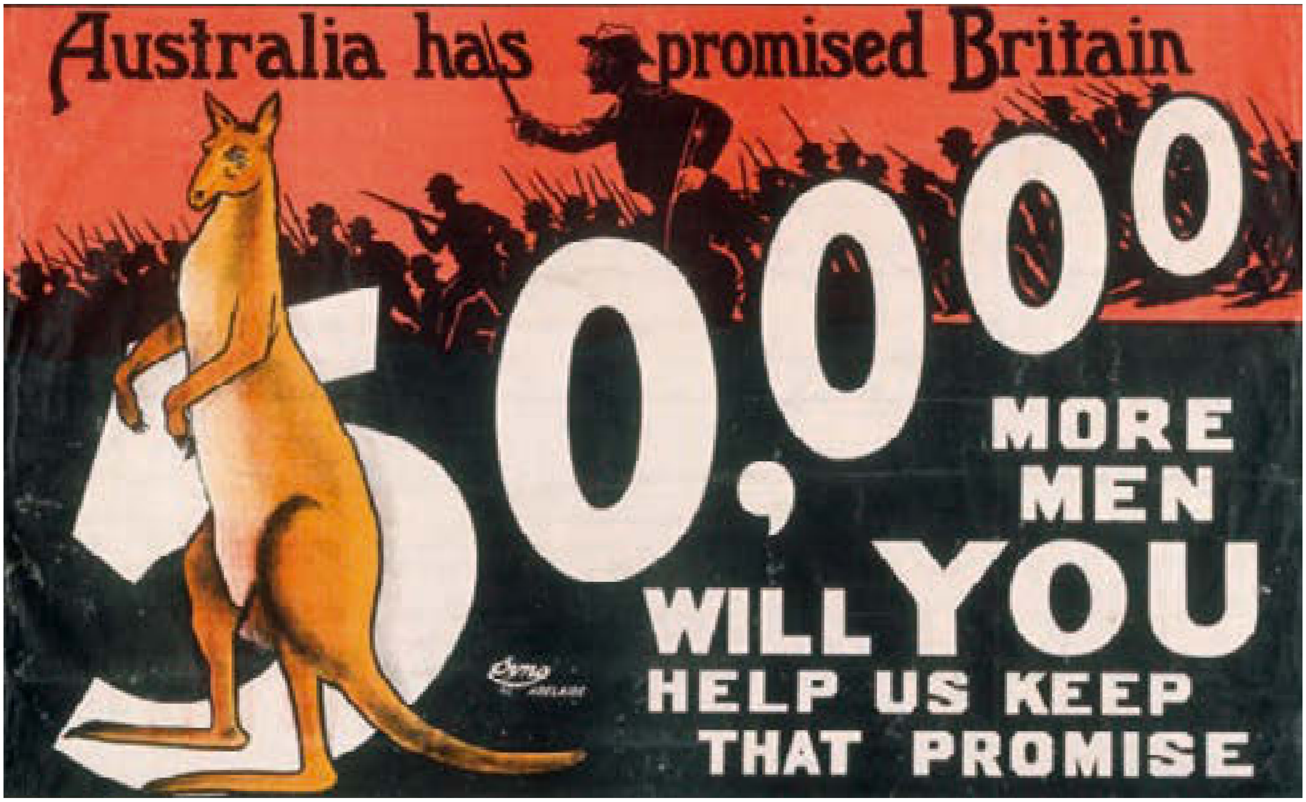
Before the outbreak of World War I, Europe had been relatively peaceful for over 40 years. The last major war (the Franco–Prussian War) had been fought in 1871, meaning that a whole generation of young men and women across Europe had grown up with no real experience of war. The same was true of Australia. Apart from a small number of soldiers who had fought for Britain in Africa during the late 1800s, Australians had no experience of war and had little understanding of what it meant.

Largely as a result of this inexperience, there was a perception that war was glorious, exciting and heroic. Young people, especially boys, were brought up on military stories and were taught military drills in school. In these stories, the heroes were rarely wounded or killed; they won their battles effortlessly, and the drills taught them to obey orders and work together. This idealistic outlook on war and military involvment encouraged a romantic view of military action.

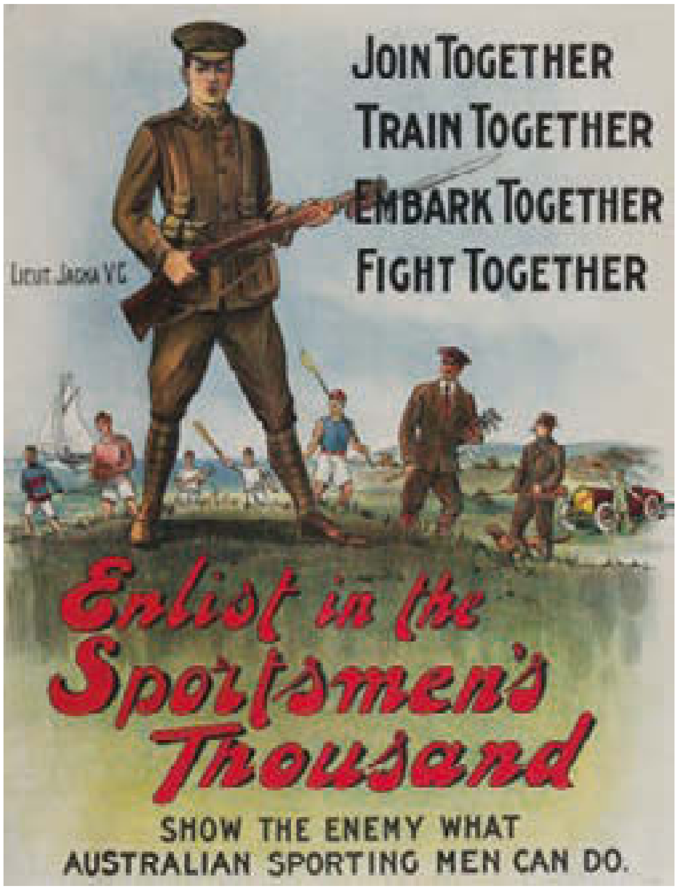
The great adventure

When World War I began in 1914, Australia had been a single, federated (united) country for only 13 years. Although Australia was a self-governing country, it was still a dominion of the British Empire and was obliged to follow the instructions of Britain in many areas of government. As a result, when Britain declared war on Germany, Australia automatically became involved, as did all other countries that were part of the British Empire.

In Australia, a wave of enthusiasm for the war effort swept the country. The men of Australia rushed to enlist in the Australian Imperial Force (AIF). According to legend, many were concerned that the war might end before they got to Europe. The Australian government initially promised to supply 20000 men to the British war effort by the end of 1914 – in reality, the number of men enlisted by this time was around 50000.



Source 1 An Australian recruitment poster from 1915


JOIN TOGETHER
TRAIN TOGETHER
EMBARK TOGETHER
FIGHT TOGETHER
LIEUT JACKA V.C.
Enlist in the Sportsmen's Thousand
SHOW THE ENEMY WHAT AUSTRALIAN SPORTING MEN CAN DO.

Source 2 An Australian recruitment poster from 1917

The reasons for enlistment were varied and complex. Some men were driven by a desire to show what their new nation could contribute to a world conflict. Others went to war purely out of loyalty to 'the mother country' – Britain. Many of the first wave of volunteers who enlisted to fight were former British soldiers. Others were British citizens who happened to be living in Australia. In addition to these people, some wanted to show their support for Britain in case Australia should need Britain's help at some stage in the future.

There were young men who joined out of a spirit of adventure. These men saw the war as an opportunity to leave home, see the world, meet beautiful foreign women and experience life beyond Australia's shores. Whole football and cricket teams joined, as did groups of workmates from businesses and factories in cities and country towns. Many women encouraged their husbands, boyfriends, brothers and even fathers to enlist. Many young women preferred to socialise with men in uniform.

The opportunity to earn a good income also acted as an incentive. The pay was 6 shillings (60 cents) per day, a figure calculated to match the average wage of Australian workers, minus the cost of rations. The promise of regular pay also encouraged many unemployed men to volunteer. As the war progressed, hatred of the enemy also became a motivation for enlistment. Propaganda stories (often exaggerated) of German atrocities were used in recruiting campaigns.

In every city and town, recruiting rallies were held. Platforms would be set up with the Australian and British flags side by side as a backdrop to the speeches. High-profile sportsmen such as footballers, cricketers and athletes would be planted in the crowd. When the call went out for young men to step forward and sign up, it was frequently one of these sportsmen who led the charge.

Among those who offered to enlist were also Aboriginal Australians. Only 400 Aborigines were accepted for service – all others were rejected on the basis that they were not 'of substantial European origin or descent'. When Australian soldiers returned from World War I, there were many benefits available to them to assist their readjustment to civilian life. Aboriginal soldiers, however, were denied access to these benefits.

Of course, not all motives for joining the war effort were noble. There were stories (perhaps just rumours) of soldiers changing their names before enlisting in order to get away from their wives or other commitments. Others enlisted to escape the boredom of jobs they hated, to leave school early, or to escape the strict rules and confines of their family homes.

Those who had fought in the Boer War (1899–1902) in Africa had some understanding of the brutality of war but, for most, war seems to have meant adventure. Based on all of the thoughts that ran through the heads of those who enlisted, particularly in the first few months, the idea of death or even injury seems to have been very much in the background.

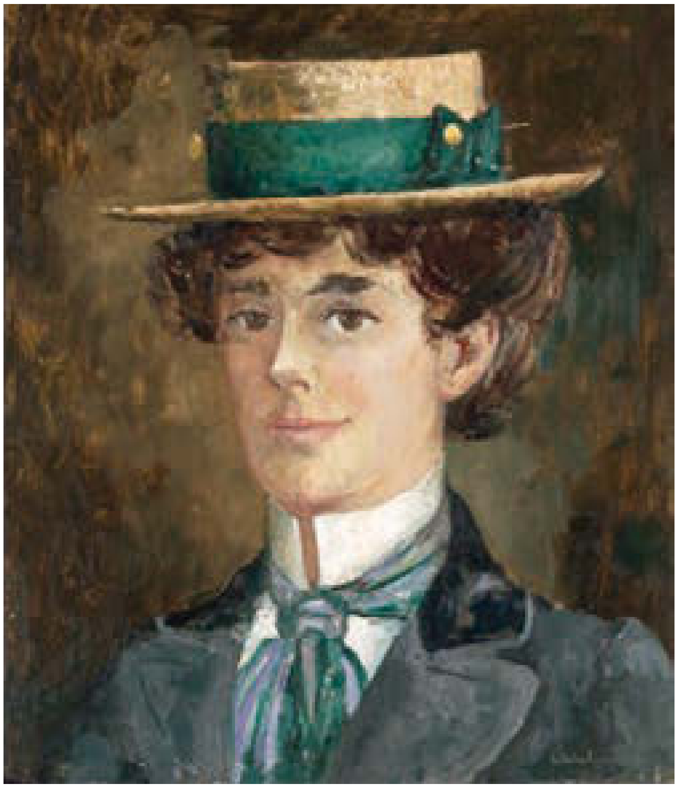
Questioning voices

Despite the positive response by many, not all Australians were enthusiastic about the war. Some argued that it was not Australia's war and that Australian troops would make little difference to the final outcome of the war. Others were opposed to the war because they were **pacifists** – people who are opposed to violence and war. One group of pacifists were the Jehovah's Witnesses, a religious group whose beliefs prevented them from participating in any armed conflict or wars.

There was also a small group known as **conscientious objectors** – people who opposed war and refused to perform military service because it went against their beliefs, religion or conscience. The Women's Peace Army, led by a woman named Vida Goldstein (see Source 3) was a women's organisation made up of pacifists and conscientious objectors. Their mission was to mobilise women in Australia who opposed the war. Goldstein, who was also a well-known suffragette (a woman demanding the right to vote), attracted large numbers of people to public meetings.

Finally, there was a small number of Australians who did not enlist because they were afraid, or because they believed it was in their best interests financially to stay at home. Very few records relating to these people exist today, but we do know that those who were reluctant to go to war often used excuses such as poor health or family responsibilities to explain their decision not to enlist.

In total, however, all of the groups who objected to the war only made up a small percentage of the total population. In 1914 and through most of 1915, the dominant feeling towards the war was positive and supportive. It was only as the harsh reality of war became clear to Australians that this initial enthusiasm began to fade away.



Source 3 Vida Goldstein, president of the Women's Peace Army, was both a suffragette and a pacifist.

Check your learning 9.5

Remember and understand

1 What was the attitude of most Australians to war before 1914? Why did they hold this attitude?

2 What were three reasons why an Australian might have wanted to enlist?

3 Why were some Aboriginal Australians not accepted for service?

4 Why were some people or groups not enthusiastic about the war?

Apply and analyse

5 Examine the two recruiting posters (Sources 1 and 2).

  a Identify the techniques used on these posters to encourage Australian men to enlist such as:
    - the overall message of the poster (what it wants the viewer to do)
    - any emotions the poster taps into
    - the effect that the poster may have had on people at the time.

  b Now identify the key features, such as:
    - symbols and images
    - words
    - arrangement of the images and words
    - colours of the posters.

  c Which poster do you think would have been more successful at the time? Justify your answer based on the techniques and elements used.

Evaluate and create

6 Use a range of print and digital resources to locate and print a series of recruitment posters from World War I (two of which must be Australian). Be sure to include posters from a range of different countries that were involved in World War I. Analyse these posters, looking for points such as:
  - appeal to sense of national identity
  - appeal to sense of adventure and excitement
  - appeal to sense of outrage and anger at the enemy.

  Create a PowerPoint presentation in which you identify the key features and techniques of the posters in each category. Discuss whether you think each poster was successful in encouraging people to get involved in the war effort and why.

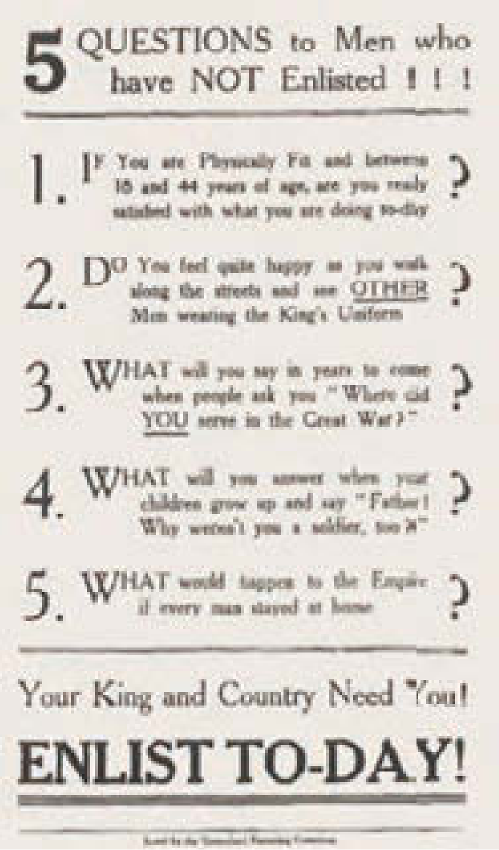
9A rich task

Why Australians enlisted to fight

When Britain declared war on Germany, Australia (part of the British Empire) was also obligated to enter the war. The Prime Minister of Australia Joseph Cook said in August 1914:

> …Whatever happens, Australia is part of the Empire, right to the full. When the Empire is at war, Australia is at war.

All major political parties, churches, community leaders and newspapers seemed to support Australia's entry to war. It was seen as a moral and necessary commitment. There was a rush to the recruiting offices. Early in the war, only the very fittest and healthiest men were accepted.



5 QUESTIONS to Men who have NOT Enlisted ! ! !

1. IF You are Physically Fit and between 18 and 44 years of age, are you really satisfied with what you are doing to-day ?

2. DO You feel quite happy as you walk along the streets and see OTHER Men wearing the King's Uniform ?

3. WHAT will you say in years to come when people ask you "Where did YOU serve in the Great War?" ?

4. WHAT will you answer when your children grow up and say "Father! Why weren't you a soldier, too?" ?

5. WHAT would happen to the Empire if every man stayed at home ?

Your King and Country Need You!

ENLIST TO-DAY!

Source 1 A recruitment poster for World War I issued by the Queensland Recruiting Committee

Source 2

Turn your eyes to the European situation and give the kindest feelings towards the mother country at this time. I sincerely hope that international arbitration will avail before Europe is convulsed in the greatest war of any time. All, I am sure, will regret the critical position existing at the present time, and pray that a disastrous war may be averted. But should the worst happen after everything has been done that honour will permit, Australians will stand beside our own to help and defend her to our last man and our last shilling.

An excerpt from a speech by Andrew Fisher, Leader of the Opposition (later Prime Minister), in 1914 just before the outbreak of war

Source 3

I wasn't eighteen. I was working on the lathe [carpentry tool], next to another chap … I said to him 'Why don't you enlist?' I said 'I'll enlist if you do'… I went right up to Victoria Barracks and enlisted. We left the factory and I had to get my father's signature. Well, I forged that.

Stan D'Altera (in A Thomson, *Anzac Memories*, Oxford University Press, p. 27)

Source 4

I have joined the Australian Army … it's not bad money here, 5/- [shillings] a day and clothes and food … nearly as good as cabinet making and not half as hard. You may [think] it's funny [my] turning up such a good job, but … this [employer] had only about three days work left for us … things are so bad out here for there is a drought on and we haven't had any rain for months, so I thought I would join the army.

Corporal RE Antill in a letter to his parents, 1914 (defencemagazine)

Source 5

I have enlisted and I don't regret it in the very least. I believe it is every young fellow's duty. There are far better men than any of us have already gone… we are the sort of men who ought to go.

Private AJ McSparrow (in B Gammage, *The Broken Years*, p. 7)

skill**drill** Evaluating the reliability and usefulness of sources

Evaluating the reliability and usefulness of sources is one of the most important, and perhaps most difficult, historical skills you need to master. The first thing to understand is that these terms '*reliable*' and '*useful*' are not interchangeable. A source can be both unreliable and useful at the same time, or both reliable and not useful at the same time.

Step 1 Evaluating reliability

To determine the reliability of a source, you need to identify whether it is biased. Being biased means having an unbalanced or one-sided opinion. Bias is found in secondary and primary sources. It is natural for people to show their opinion when they write something. To recognise bias in a source, ask yourself the following questions:

- Who wrote it or made it?
- When was it written or made?
- Why was it written or made?
- Was the person who wrote or made it paid? If so, who paid them?
- Does it distort the facts?
- Does it give one side of the story, or is it balanced?
- Can the views expressed in this source be verified by another source?

By finding the answers to these questions, you can come to a conclusion about whether the source is biased. Make sure you give specific reasons for your conclusion. You need to explain how and why a source is biased, and how this bias affects its reliability. The more biased the source, the less reliable it is. But remember, no single source is ever completely reliable or unreliable.

Step 2 Evaluating usefulness

Some historical sources are more useful than others. But sources are not simply useful or not useful in their own right. They are useful or not useful depending on what you wish to find out from them.

Just because a source is biased does not automatically mean that it is not useful. It may be extremely useful if you are investigating the opinions of a particular group at a particular time. However, if you are investigating 'the facts' of an event, a biased source may be much less useful.

For example, anti-Chinese propaganda during the gold rushes may be very useful when considering Australian attitudes towards migrants in the 19th century, but not much use as evidence about the important role that Chinese migrants played in the development of the Australian economy. So to reach a conclusion about whether a source is 'useful', you need to be very clear about *what* you want to use the source for.

Use the following steps to evaluate a source's usefulness.

- Be clear about what historical question you are investigating.
- Identify whether the source is biased/reliable using the process described.
- Look at what the source is telling you and compare it to what you need/would like to know. Remember to consider both explicit and implicit messages.
- Ask yourself: what are the uses of this source for answering my historical question?
- Ask yourself: what are the problems of using this source to answer my historical question?
- Make a final judgement about the source's usefulness for your purposes.

Apply the skill

Read each of the sources provided in this section. Then, using the steps provided:

1 Evaluate each source's reliability.

2 Evaluate how useful each source would be in explaining the factors that motivated Australian men to enlist.

3 Evaluate how useful each source would be in explaining the methods used by the Australian Government to encourage men to enlist.

Be sure to explain how you reached your conclusions.

Extend your understanding

1 Think about some of the reasons why young men decided to enlist for World War I. Do you think the same reasons apply for young Australians who enlist to fight in wars today?

2 Visit the Australian Army Reserve website.
  a Identify some of the methods used by the creators of the website to encourage Australians to join the Reserves.
  b Create a Venn diagram to demonstrate the similarities and differences between these methods.

9.6 The nature of warfare in World War I

Unlike earlier wars, World War I was fought across a large part of the world and involved many countries. Britain, France and Russia fought against Germany and its allies on the Western Front (a zone of fighting in Western Europe). Germany also fought against Russia on the Eastern Front (a zone of fighting in Eastern Europe). There was also fighting in Turkey and the Middle East, and in North Africa. Finally, there were small conflicts in the Pacific Ocean, where a combined effort of Japanese and Australian forces took over German colonies in New Guinea. The common feature across all regions and theatres was the emergence of new technologies.

New technologies

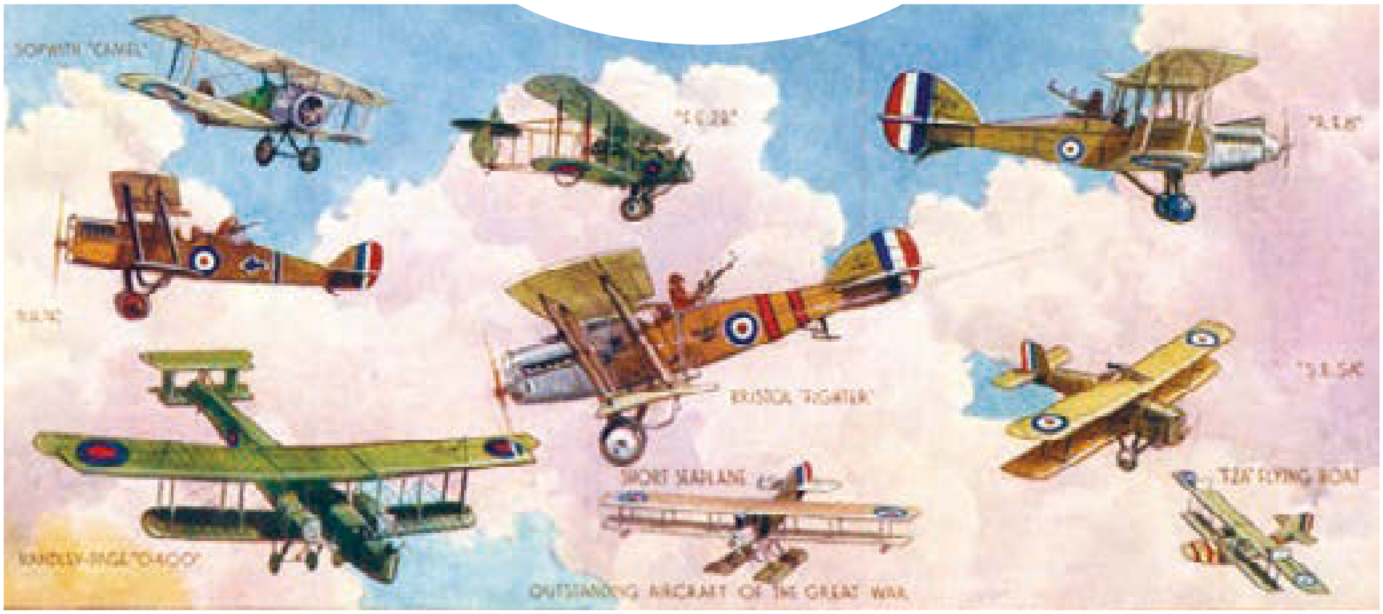
Over the course of World War I, many new technologies were introduced and existing technologies such as military vehicles and weapons were improved. Developments in powerful long-range weaponry, such as the machine gun and heavy artillery, were particularly important. Deadly new chemical weapons and gases were also a significant development.

Much of this technology is blamed for extending the war, as the conflict quickly became an evenly matched battle of technology and tactics, with neither side able to break the deadlock. Unlike earlier wars, in which the soldiers moved around constantly to gain an advantage, both sides on the Western Front were forced to dig trenches for protection, bringing the armies to a stalemate.

Guns and artillery

Machine guns, which had first been used during the American Civil War, were improved for use in World War I (see Source 2). Many were capable of firing up to 600 rounds of ammunition (bullets) per minute in short bursts. Facing one machine gun was similar to facing 250 soldiers with standard rifles. Although these new machine guns often overheated and were heavy and difficult to move through the mud, they were devastating when used against oncoming troops.

Heavy artillery guns were also used widely in World War I for the first time. Like canons, these guns could fire large shells over a long distance, usually projecting them in an arc to land on the target from above. Like machine guns, heavy artillery guns were heavy and difficult to move. They were usually mounted on wheels that often became bogged down in the mud or got stuck in bomb craters.



Source 1 British aircraft like the ones shown here played a vital role in World War I.

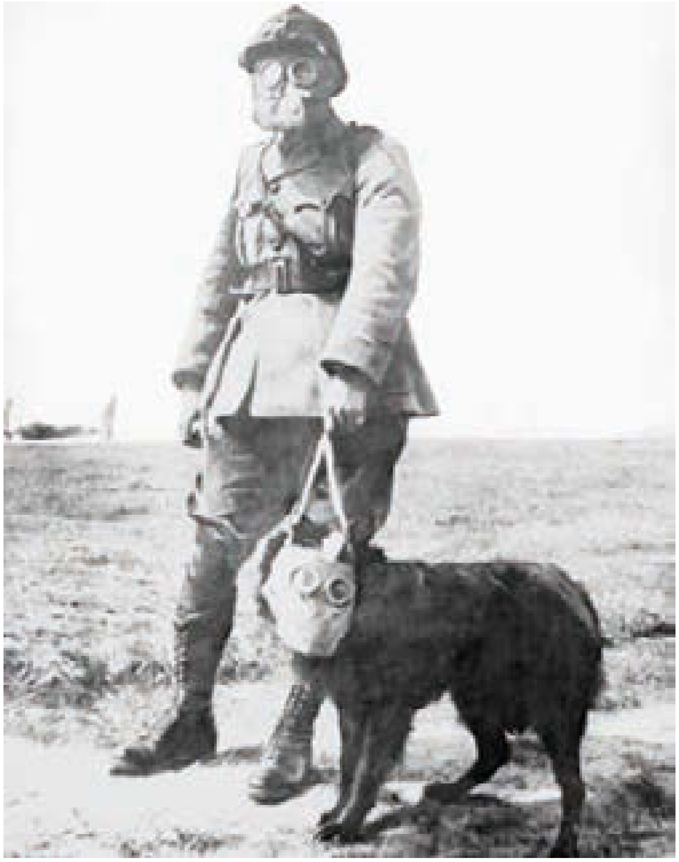
Source 2 British machine gun operators wearing gas masks fire on the enemy during the Battle of the Somme in 1916.

Gas

In April 1915, Germany introduced poison gas as a weapon of war (see Source 4). Chlorine, which was blown over the enemy trenches, burned and destroyed the respiratory tracts (airways) of anyone without a gas mask, causing terrible pain and death. Other gases were introduced throughout the war, including mustard and tear gas. Poison-gas attacks were so horrific that the use of chemical and biological weapons was banned under a treaty signed in 1925 known as the Geneva Protocol.

Tanks

The British army introduced the first tanks into the war in September 1916 at the Battle of the Somme in France. While they were successful at overcoming barbed-wire obstacles and trenches, the mechanical unreliability of these early tanks meant they were not always so useful. The first tanks were designed and built quickly, so they frequently broke down or became stuck in muddy trenches. The crews inside the tanks had to endure unbearably hot and noisy conditions, almost constantly choking on the fumes inside the cab. By the end of 1917, improvements in the design and manufacture – and tank battle tactics – made tanks more effective.



Source 4 A soldier and dog wearing gas masks work to find the wounded in areas where poison gas has been used.

Aircraft

Large-scale aerial warfare was conducted for the first time during World War I. At first, small planes were used to scout for enemy positions. Later, planes armed with machine guns were used in aerial combats, known as **dogfights**.

Huge airships called **zeppelins** (named after their inventor Count Ferdinand von Zeppelin) were used by the Germans in the first air raid over England in January 1915. Made of a cylindrical metal frame covered with fabric and filled with gasbags full of hydrogen, zeppelins were able to fly higher than conventional aircraft and drift almost silently over their targets. This made zeppelins difficult to shoot down with normal anti-aircraft guns. The ability to hit targets accurately from a zeppelin was poor though, and they were also vulnerable to strong winds that could blow them off course. Towards the end of the war, zeppelins were largely replaced by multi-engine bomber planes, such as the Gotha G.V. bomber (see Source 3). Britain responded with its equivalent, the Handley Page Type O bomber (see Source 1, bottom left corner).

Source 3 German airmen attach a 100-kilogram bomb to the underside of a Gotha G.V. bomber.

War at sea

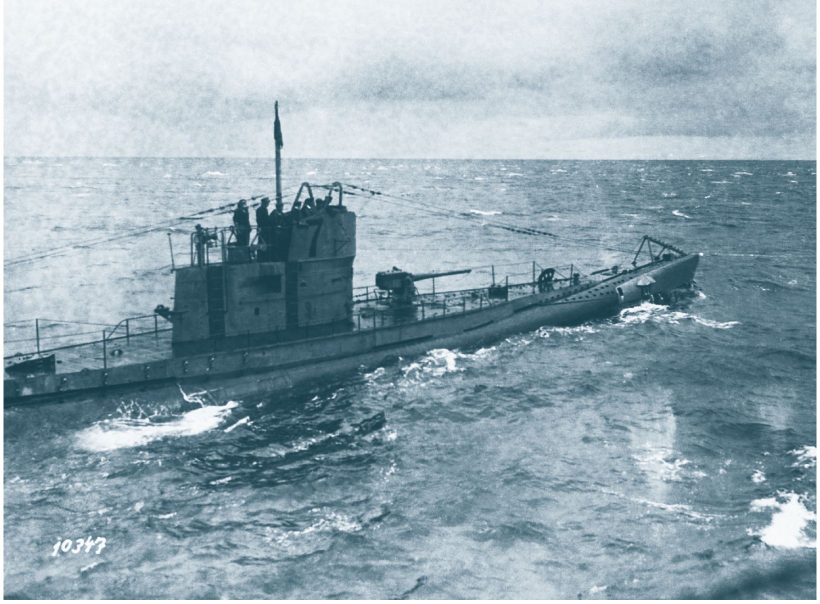
In 1914, the sea was vital for transportation, trade and communications. Protecting the sea lanes in your own waters – or striking at those of the enemy – was an essential part of the war effort.

Submarines were widely used during World War I. Initially they were used by the Germans to attack and sink trade ships carrying imported food and vital goods between allied countries. German submarines were commonly referred to as U-boats, short for *Unterseeboote* (undersea boats). U-boats were able to disrupt the movement of goods and people by sea and struck fear into those travelling by sea.

Another naval tactic that reduced the ability of ships to carry soldiers and supplies was the laying of underwater mines (explosives) in the North Sea. Although agreements had been made regarding where mines could be placed, neither side was very strict when following them. Mines made the North Sea a very dangerous place for ships. This was also a problem for the **neutral nations** of Norway and Sweden, which were heavily reliant on the North Sea for fishing and trade with the rest of the world.

Communications

Advances in communication technologies during World War I allowed faster contact between commanding officers behind the scenes and soldiers fighting on the front line. The development of telephone and wireless (radio) systems allowed instant reports from the battlefield to be passed to command centres. Tactical decisions could be made much more quickly. On the downside, telephone lines had to be laid in each new location where fighting took place and were easily damaged by artillery. Wireless radios were also very heavy and difficult to move. Despite the increased use of these new technologies, soldiers still acted as runners to relay information. Motorbike couriers, carrier pigeons and even dogs were used at times (see Source 6).



Source 5 A surfaced German U-boat during World War I

Source 6 Dogs were sometimes used to carry messages to and from the battlefield. This dog is bringing orders to a soldier in the trenches.

Check your learning 15.6

Remember and understand

1 Identify three ways in which the technologies used in World War I were different from those used in earlier wars.

2 In what ways did submarines change the way World War I was fought?

Apply and analyse

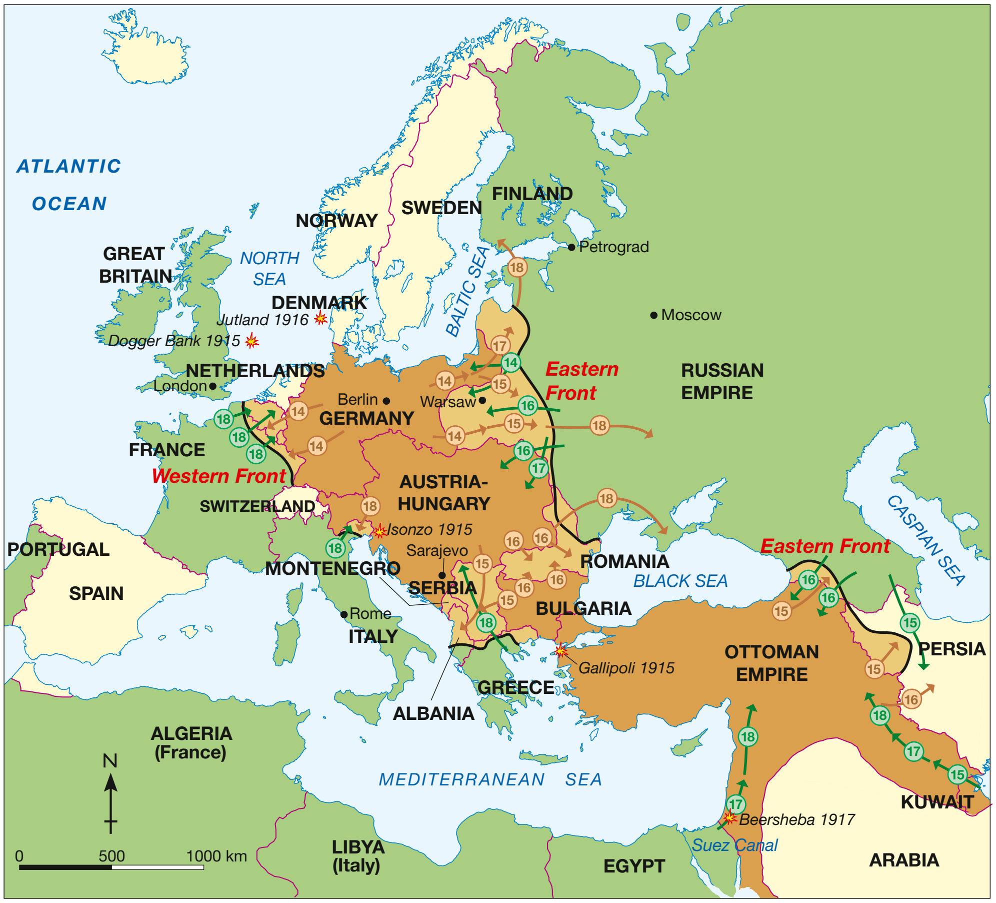
3 Do you think new developments in technology actually prolonged the war? Explain your answer.

4 Why do you think that the use of poison gas was banned under the Geneva Protocol in 1925, while the use of other types of weapons was not?

5 What were the advantages and disadvantages of new developments in communication technologies?

9.7 Where World War I was fought

WORLD WAR I: MAJOR BATTLES AND ALLIANCES


ATLANTIC OCEAN
NORTH SEA
BALTIC SEA
BLACK SEA
CASPIAN SEA
MEDITERRANEAN SEA
GREAT BRITAIN
NORWAY
SWEDEN
FINLAND
DENMARK
NETHERLANDS
GERMANY
FRANCE
SWITZERLAND
PORTUGAL
SPAIN
AUSTRIA-HUNGARY
MONTENEGRO
SERBIA
ROMANIA
BULGARIA
ITALY
ALBANIA
GREECE
RUSSIAN EMPIRE
OTTOMAN EMPIRE
PERSIA
KUWAIT
ARABIA
EGYPT
LIBYA (Italy)
ALGERIA (France)
Petrograd
Moscow
London
Berlin
Warsaw
Rome
Sarajevo
Jutland 1916
Dogger Bank 1915
Isonzo 1915
Gallipoli 1915
Beersheba 1917
Suez Canal
Western Front
Eastern Front
Eastern Front
N
0
500
1000 km
LEGEND
Neutral states
Allies
14 Allied offensives, year
Battle front
Major battle
Central Powers
Occupied by the Central Powers
14 Central Powers offensives, year

Source 1

Source: Oxford University Press

In World War I, the greatest loss of life took place in Europe. Many of the best-known land battles of World War I were played out in an area in France and Belgium known as the Western Front (see Source 1). However, the Eastern Front was also very important, especially in terms of the conflict between Germany and Russia. A third front, along the border between Italy and Austria, was the scene of fierce fighting and great loss of life.

Because so many European nations had large colonial empires, people from all over the world participated in the conflict. Members of the British Commonwealth (such as Australia, India, South Africa, Canada and New Zealand) were involved in the conflict. The war came close to Australia because Germany had colonies in Samoa and New Guinea. As early as August 1914, New Zealand forces occupied German Samoa with no loss of life. Australian forces had driven the Germans out of New Guinea by the end of 1914.

World War I was also fought in the Middle East. The Gallipoli campaign, for example, was designed to open up access for the Allies. They needed this access in order to get troops and supplies into Russia to aid the campaign on the Eastern Front. In the end, the Gallipoli campaign was abandoned, but not before the deaths of around 140000 soldiers from countries including Britain, Canada, France, Australia, New Zealand, India and Turkey. More than half of those killed were from Turkey.

Following the withdrawal from Gallipoli in December 1915, some of the Allied troops, including the Australian Light Horse, were redeployed to Palestine where they fought alongside Arab tribes against Turkish troops from the Ottoman Empire.

Japan, a rapidly modernising nation, was also involved on the side of the Triple Entente. In response to a request from Britain in 1914, Japanese ships led raids on German naval vessels around Chinese waters. The Japanese further provided 17 battleships to assist British naval actions in the Mediterranean Sea and in South Africa. Japan also took advantage of the war situation to extend its power and influence in China.

key**concept:** Contestability

Lawrence of Arabia

When World War I began, TE Lawrence (see Source 2) was a university student, specialising in the study of Middle Eastern archaeology. In October 1914, he became a member of British intelligence and shipped out to Cairo in Egypt. Over the course of the war, Lawrence became a close adviser to an Arabic prince by the name of Emir Faisal. Lawrence and Faisal helped to unite a number of Arabic tribes and convince them to fight against the troops of the Ottoman Empire. During the war, the Ottoman Empire was a member of the Central Powers fighting against the Allies (see Source 1). Lawrence convinced the Arabic tribes to support British troops and military strategies.

Lawrence also worked with the Arab tribes against the Ottoman Turks and supported their demands for independence from the Ottoman Empire in 1916 – an event known as the Arab Revolt. His adventures earned him the title 'Lawrence of Arabia' and made him a popular hero in Britain during the war. Later, Lawrence's reputation as a heroic figure was questioned by historians who contested the accuracy of his reports and writings about the role he played in the Arab Revolt.

For more information on the key concept of contestability, refer to page 210 in 'The history toolkit'.

Source 2 TE Lawrence – also known as Lawrence of Arabia – in 1915

The USA enters the war

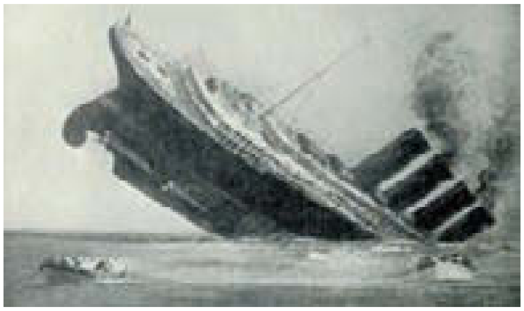
At the start of the war in 1914, the USA remained a neutral country, but its sympathies definitely lay with the members of the Triple Entente – Britain, France and Russia. In the early years of the war, the USA continued to trade with Britain and provided indirect support for the war effort in Europe by transporting supplies across the Atlantic Ocean.

In an attempt to stop this trade, the Germans began to use submarine warfare. On 7 May 1915, the British passenger ship *Lusitania* was sunk by a German submarine, killing 1198 passengers (see Source 3). Among the dead were 128 Americans.

Following the sinking of two more British ships carrying American passengers, Germany agreed to stop submarine attacks on ships carrying civilians. This pledge lasted until March 1917, when German submarines sank American ships. As a result of these attacks, on 6 April 1917, the USA declared war on Germany.

Another suggested motivation for the USA joining the war was the large amount of money that American bankers had lent to the British and French. It was important that the Triple Entente countries win the war in order for them to pay back the debt to the USA.

The USA also supplied extra food, facilities and money to fund the final months of the campaign.



Source 3 A sketch of the passenger ship *Lusitania* sinking on a trip from Liverpool to New York after it was hit by a torpedo from a German U-boat

Check your learning 9.7

Remember and understand

1 World War I was predominantly a European war. Why then were people from so many other parts of the world involved?

2 What was the main purpose of the Gallipoli campaign?

Apply and analyse

3 What impact do you think the early Australian and New Zealand successes in the Pacific would have had on attitudes to war in Australia?

Evaluate and create

4 Using the information provided, together with your own research, identify the main reasons why the USA became involved in World War I. Which do you believe to be the most important? Why?

9.8 The Western Front

The most common image that comes to mind when people think about World War I is the image of the trenches, and the mud, blood and barbed wire that were features of the long, drawn-out war on the Western Front. Although this was generally regarded as the most important area or 'theatre of war' in which the war was fought, there were also many others (see Source 1).

At the start of the war in August 1914, the Germans had marched through Belgium into France. Fierce resistance from the British and French stopped them from moving further into France. However, the Allies were unable to drive the Germans back, and by Christmas 1914 there was a deadlock. The Germans and the Allies faced each other across a line of trenches (see Source 1) that stretched from Ostend on the Belgian coast in a south-easterly direction to the Swiss border (see Source 2 for more detail).

Many historians see the Western Front as the defining experience of World War I. New weapons, such as gas and tanks, were introduced there. Defensive tactics using machine guns, trenches, barbed wire and artillery meant that rather than a rapid war of movement, war on the Western Front became bogged down in a senseless series of attacks and counter-attacks, each achieving little but costing millions of lives.

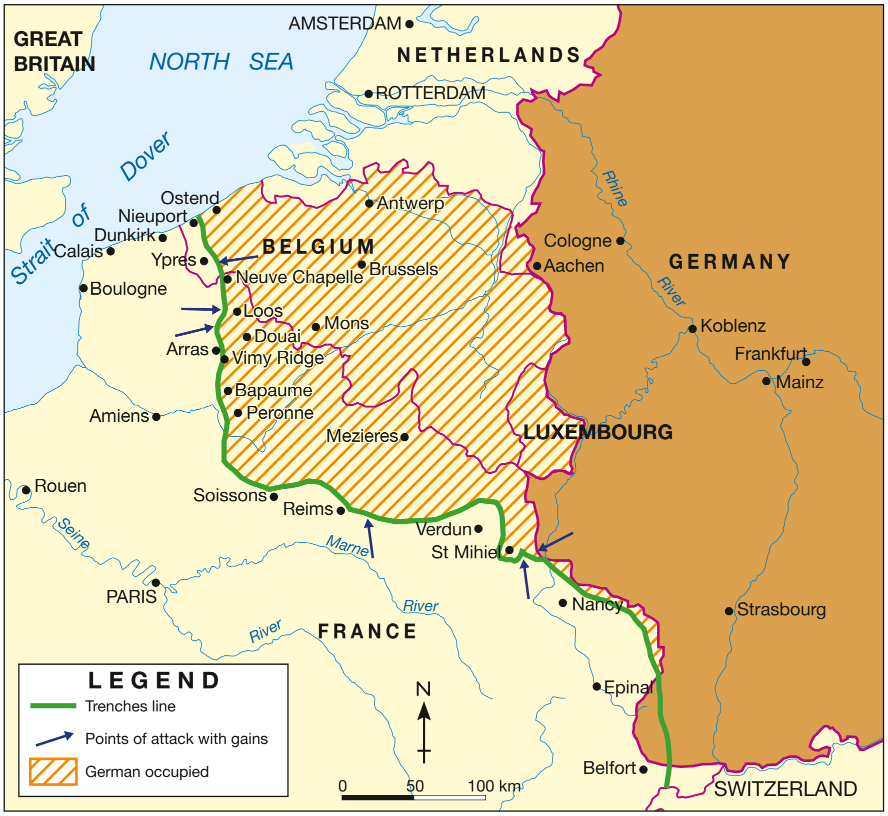
Breaking the stalemate

Between 1915 and 1918, many attempts were made to break the stalemate of trench conflict. These attempts tended to follow a pattern. Initially there would be a long and sustained artillery attack – opposing trenches would be bombarded with explosive shells. These attacks could go on for a few hours or sometimes for many days. It was believed that this would force the defending troops underground, destroying their fortifications and clearing the way for troops to cross **no man's land** (the narrow strip of land between opposing trenches that belonged to neither army).

Weighed down with heavy equipment, soldiers would cross the strip of territory to their opponent's trenches.

Source 1 French soldiers wait in their trenches on the Western Front during World War I.

EUROPE: THE WESTERN FRONT IN 1915


GREAT BRITAIN
NORTH SEA
AMSTERDAM
NETHERLANDS
ROTTERDAM
Strait of Dover
Ostend
Nieuport
Dunkirk
Calais
Antwerp
BELGIUM
Ypres
Neuve Chapelle
Brussels
Boulogne
Loos
Mons
Douai
Arras
Vimy Ridge
Bapaume
Peronne
Amiens
Cologne
Aachen
GERMANY
Rhine River
Koblenz
Frankfurt
Mainz
LUXEMBOURG
Mezieres
Rouen
Soissons
Reims
Verdun
St Mihiel
Seine
Marne
PARIS
River
River
Nancy
Strasbourg
FRANCE
Epinal
Belfort
SWITZERLAND
N
0
50
100 km
LEGEND
Trenches line
Points of attack with gains
German occupied

Source 2 The two-trench system along the Western Front ran unbroken from the Belgian coast to Switzerland. Source: Oxford University Press

Source 3 Allied soldiers at the Battle of the Somme, 1916

Source 4 The remains of Commonwealth soldiers who died during the Battle of Fromelles, and objects recovered at the site, are recorded by specialists of the Oxford Archaeology Institute after being recovered in mass graves in Fromelles

Struggling through mud-filled shell holes created by their own artillery, they might learn that the bombardment had not destroyed the barbed-wire obstacles between the lines. More frightening still was the possibility that the artillery attack had failed to destroy the enemy's position. Often, as soldiers made their way across no man's land, the enemy would emerge from deep bunkers to fire on them with machine guns.

Generally, such assaults on enemy trenches failed to achieve their goals. Confusion, smoke, noise and death turned plans into chaos. If attackers reached enemy lines, hand-to-hand (or one-on-one) combat with rifles, bayonets, pistols and grenades often followed. If ground was gained, it could be retaken in a counter-offensive only weeks later. The only real consequence of most of the battles that took place on the Western Front over four years was death and injury.

The Somme

The first Battle of the Somme (in an area along the banks of the Somme River) was one of the most costly attempts to break the stalemate of the trenches. Between July and November 1916, the Allied forces tried to break through German lines. Focused on a 19-kilometre front in northern France, the soldiers managed to push the Germans back by about 8 kilometres. These gains came at an enormous price. The initial 'softening up' bombardment used over 1.5 million shells in a week-long attack. British deaths on the first day of the assault are estimated at over 19 000. Thirty-five thousand were injured and 2000 were counted as missing. French casualties for the first day alone were around 7000.

Later in the Somme campaign, Australian and New Zealand troops fought at Pozières from 23 July to 8 August 1916. After making early gains, Australia suffered over 23 000 casualties. By the end of the Somme campaign, casualty figures for the Allies were around 620 000 dead and wounded, and 500 000 for the Germans.

Australian engagements on the Western Front

Australians fighting on the Western Front between 1916 and 1918 were engaged in numerous battles that earned more than 50 Victoria Crosses for the soldiers who participated. The Victoria Cross is the highest Commonwealth military decoration for valour 'in the face of the enemy'. Australians again distinguished themselves in battle and earned a reputation for courage and toughness, especially in 1918, under the leadership of General Sir John Monash.

There was also terrible loss of life. In battles along the Somme, and at towns such as Passchendaele, Villers-Bretonneux, Ypres and Amiens, thousands of soldiers were killed or wounded, often for little gain in the futile 'game' of trench warfare.

Two of the most destructive battles involving Australians were at Fromelles in northern France in 1916 and at Bullecourt, closer to Paris, in 1917. At Fromelles, an attack on the German trenches was designed to draw German attention away from an onslaught on the German lines 80 kilometres to the south, on the banks of the Somme River.

The attack was unsuccessful and the cost was terrible. In one day, 1917 Australian soldiers were killed and over 3600 were injured, some to die later of their injuries. This event has been described as 'the worst 24 hours in Australia's entire history'.

Because the Germans quickly regained any territory they had lost, the Australians had no opportunity to bury the dead. The Germans buried many in mass pits. During the 1920s, most of the bodies were reburied in Commonwealth War Graves cemeteries, but one mass grave remained undiscovered until 2007. In that year, as a result of painstaking research by war historian Lambis Englezos, a burial site was identified on the edge of the town of Fromelles. It has since been confirmed that up to 400 Australian soldiers are buried in this mass grave. The process of identifying these soldiers and preparing them for reburial (see Source 4), with full military honours, in a newly built cemetery is slow and delicate. Up to 75 soldiers have been positively identified so far through the use of DNA technology.

Nurses on the Western Front

At the start of the war, a small number of women wanted to join the services but were told that war was 'no place for ladies'. The only women allowed to enlist and serve overseas were nurses.

The nurses worked under appalling conditions, especially on the Western Front where makeshift field hospitals were often set up in trenches behind the lines (see Source 6). The nurses became known as 'the roses of no man's land'.

Over the course of World War I, 2562 Australian nurses joined the AIF as members of the medical units. Out of this number, 2139 served overseas in the Middle East and on the Western Front. Twenty-five women lost their lives while serving overseas and 388 received military honours.

Source 5

> I cannot remember what came next, or what I did, except that I kept calling for the orderly to help me and thought he was funking [showing cowardice], but the poor boy had been blown to bits. Somebody got the tent up, and when I got to the delirious pneumonia patient, he was crouched on the ground at the back of the stretcher. He took no notice of me when I asked him to return to bed, so I leaned across the stretcher and put one arm around and tried to lift him in. I had my right arm under a leg, which I thought was his, but when I lifted I found to my horror that it was a loose leg with a boot and a puttee on it. It was one of the orderly's legs which had been blown off and had landed on the patient's bed. The next day they found the [body's] trunk about 20 yards away.

Sister Kelly, an Australian nurse in France describing her experiences when a bomb hit a casualty clearing station behind the lines

Source 6 A nurse in a makeshift hospital on the Western Front

Check your learning 9.8

Remember and understand

1 In your own words, define 'the Western Front'.
2 Why had the war become 'bogged down' on the Western Front by the end of 1914?
3 What was 'no man's land'?
4 Describe the pattern followed in most of the attempts to break the stalemate on the Western Front.
5 Why is the first Battle of the Somme regarded as one of the most disastrous battles of the war?

Apply and analyse

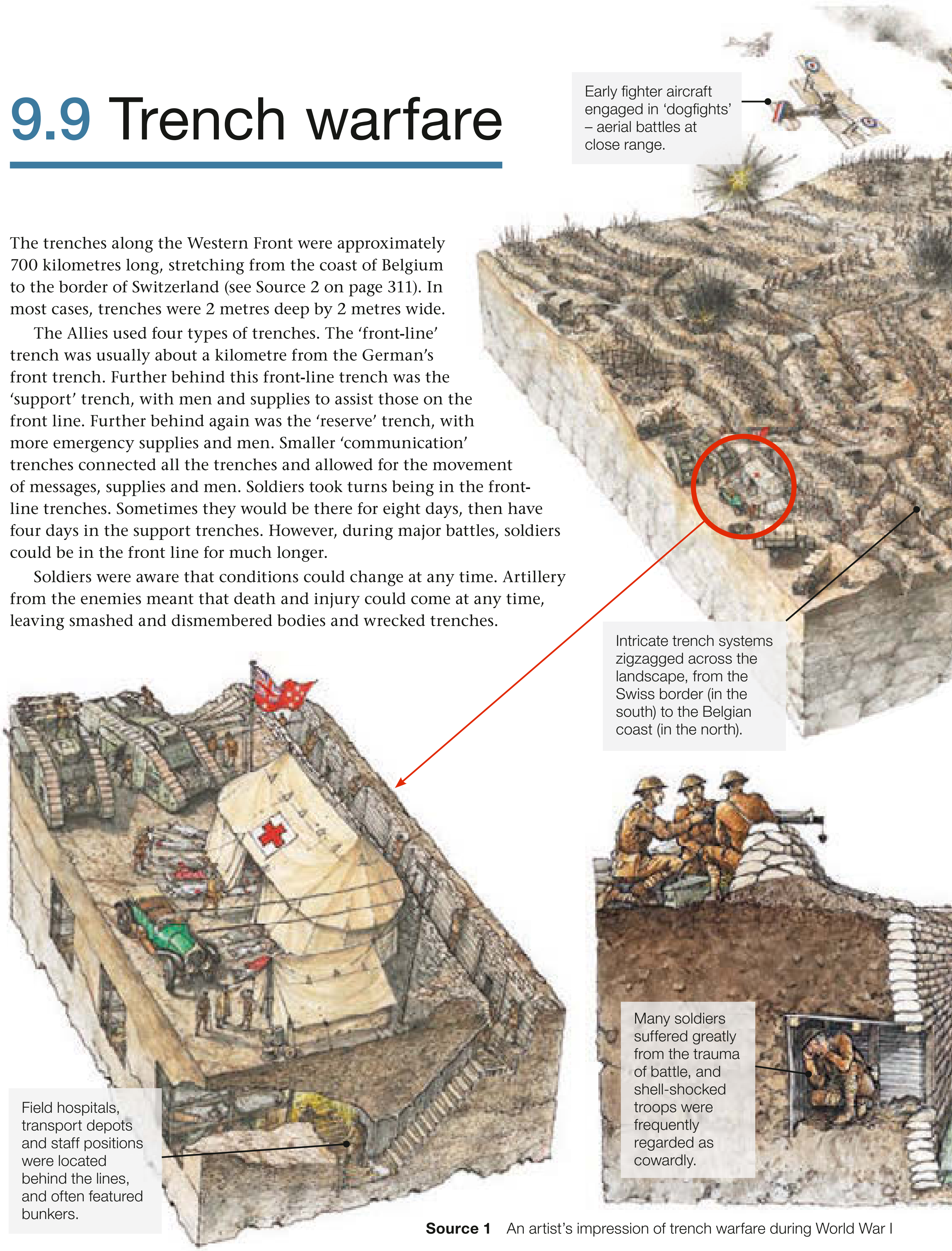
6 What qualities did nurses need to possess in order to do their jobs successfully under such difficult circumstances?
7 When it was obvious that little or nothing was gained through repeated assaults on enemy trenches, why do you think military commanders continued to order these assaults?
8 Despite their knowledge of terrible loss of life and injury, soldiers continued to take part in the assaults on the Western Front. Suggest three reasons why they did so.

9.9 Trench warfare

The trenches along the Western Front were approximately 700 kilometres long, stretching from the coast of Belgium to the border of Switzerland (see Source 2 on page 311). In most cases, trenches were 2 metres deep by 2 metres wide.

The Allies used four types of trenches. The 'front-line' trench was usually about a kilometre from the German's front trench. Further behind this front-line trench was the 'support' trench, with men and supplies to assist those on the front line. Further behind again was the 'reserve' trench, with more emergency supplies and men. Smaller 'communication' trenches connected all the trenches and allowed for the movement of messages, supplies and men. Soldiers took turns being in the front-line trenches. Sometimes they would be there for eight days, then have four days in the support trenches. However, during major battles, soldiers could be in the front line for much longer.

Soldiers were aware that conditions could change at any time. Artillery from the enemies meant that death and injury could come at any time, leaving smashed and dismembered bodies and wrecked trenches.



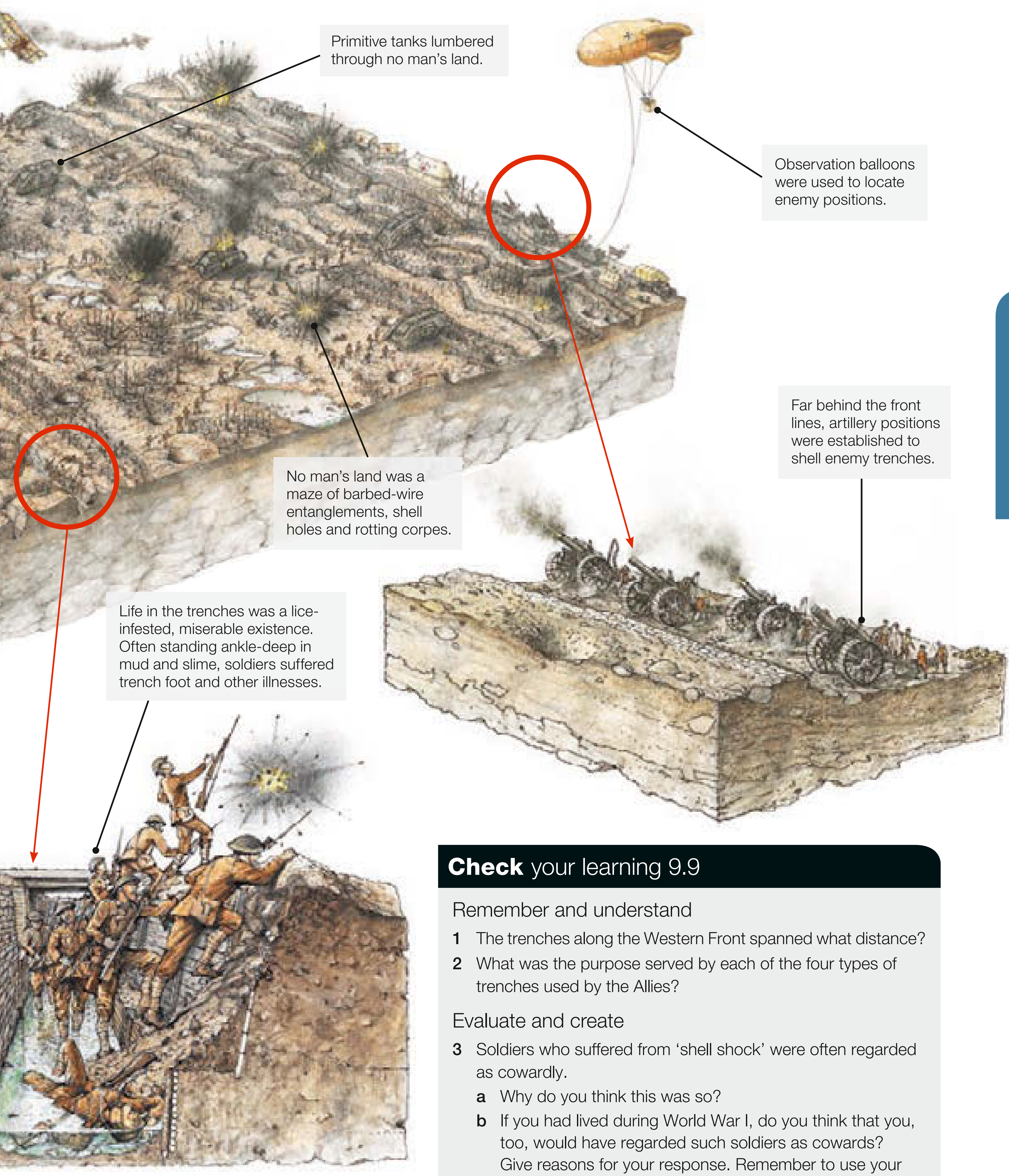
Early fighter aircraft engaged in 'dogfights' – aerial battles at close range.

Intricate trench systems zigzagged across the landscape, from the Swiss border (in the south) to the Belgian coast (in the north).

Field hospitals, transport depots and staff positions were located behind the lines, and often featured bunkers.

Many soldiers suffered greatly from the trauma of battle, and shell-shocked troops were frequently regarded as cowardly.

Source 1 An artist's impression of trench warfare during World War I



Primitive tanks lumbered through no man's land.

Observation balloons were used to locate enemy positions.

Far behind the front lines, artillery positions were established to shell enemy trenches.

No man's land was a maze of barbed-wire entanglements, shell holes and rotting corpes.

Life in the trenches was a lice-infested, miserable existence. Often standing ankle-deep in mud and slime, soldiers suffered trench foot and other illnesses.

Check your learning 9.9

Remember and understand

1 The trenches along the Western Front spanned what distance?

2 What was the purpose served by each of the four types of trenches used by the Allies?

Evaluate and create

3 Soldiers who suffered from 'shell shock' were often regarded as cowardly.
   a Why do you think this was so?
   b If you had lived during World War I, do you think that you, too, would have regarded such soldiers as cowards? Give reasons for your response. Remember to use your historical empathy skills when you answer this question.

9.10 The Gallipoli campaign

In an attempt to break the stalemate that had developed on the Western Front, Winston Churchill (Britain's First Lord of the Admiralty), who was in charge of the Royal Navy, argued for an attack on Turkey. Turkey was part of the Ottoman Empire and an ally of Germany. The Gallipoli campaign, as it became known, was the first major battle of World War I for Australian troops. It took place on the Gallipoli Peninsula in Turkey. Although many Australian men who enlisted in the early months of the war believed they would be travelling to Europe to fight against the Germans, many were instead sent to fight against the Turks.

Formation of the Anzacs

When the war began in 1914, there was an enthusiastic response from people in Australia and New Zealand. Initially the two military forces of Australia and New Zealand were separate. The Australian troops formed the First Australian Imperial Force; and the New Zealanders formed the First New Zealand Expeditionary Force.

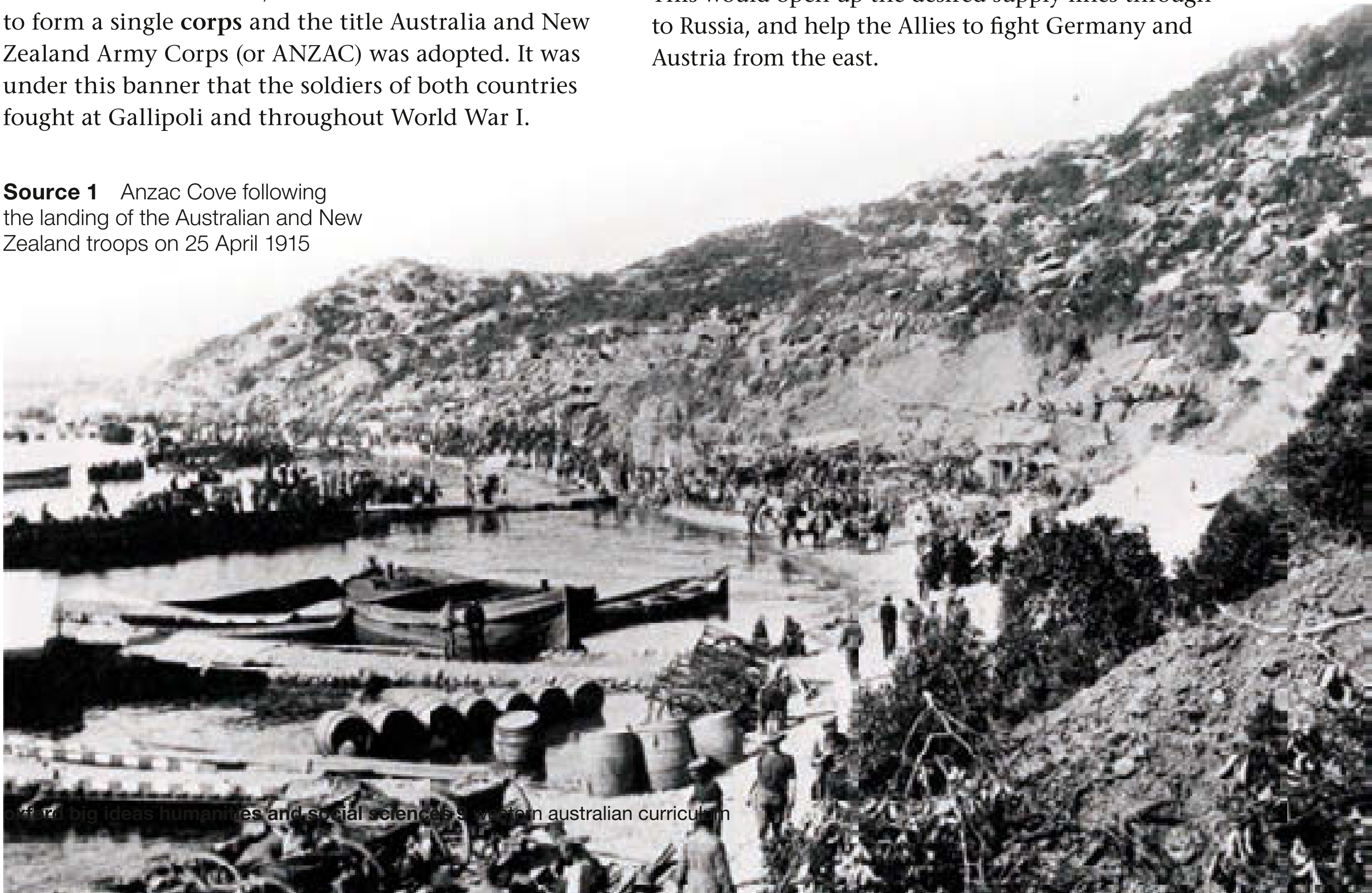
Early in 1915, as the two forces were training in Egypt, General Birdwood, commander of the Australian and New Zealand forces, decided to combine both forces to form a single **corps** and the title Australia and New Zealand Army Corps (or ANZAC) was adopted. It was under this banner that the soldiers of both countries fought at Gallipoli and throughout World War I.

The Gallipoli landing

The Gallipoli campaign was launched because Britain and France needed to move troops, equipment and weapons to allied troops in Russia. In order to do this they needed to travel across the Mediterranean Sea, pass through Turkish waters and cross over the Black Sea into Russia (see Source 3). As a result, the plan required Turkey (part of the Ottoman Empire and an ally of Germany) to be forced out of the war.

The first part of the campaign plan was launched in March 1915. This involved a naval attack through the Dardanelles – a sea passage from the Mediterranean Sea to the Black Sea (see Source 4). This action failed because the entrance to the Dardanelles had been laid with underwater mines. Three Allied battleships were destroyed by these mines, and another three were badly damaged.

A plan was then developed to launch a land attack on the Gallipoli Peninsula from the Aegean Sea coast. The hope was that the Allies would surprise the Turks, defeat them quickly and then march on to take control of the Turkish capital, Constantinople (now known as Istanbul). This would open up the desired supply lines through to Russia, and help the Allies to fight Germany and Austria from the east.



Source 1 Anzac Cove following the landing of the Australian and New Zealand troops on 25 April 1915

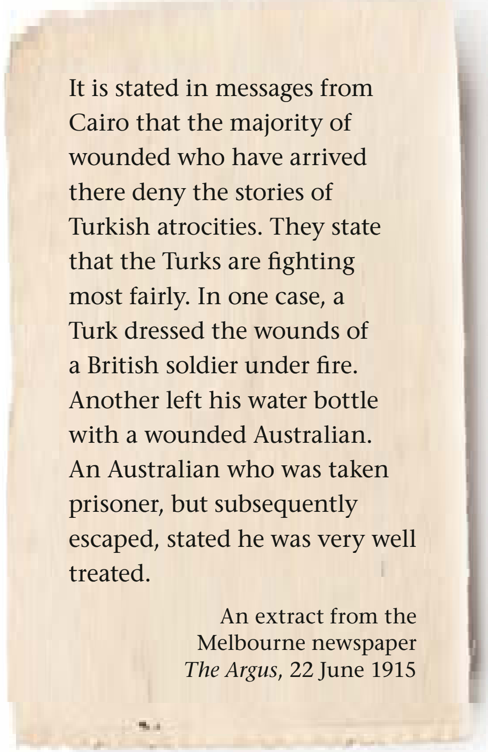
On 25 April 1915, ground troops from Britain, France, Australia, New Zealand, India and the British dominion of Newfoundland (now part of Canada) landed on the Gallipoli Peninsula. The campaign was in trouble from the beginning. As the Australian and New Zealand troops landed at what is now called Anzac Cove, they faced cliffs up to 100 metres high and heavy gunfire from behind the Turkish fortifications. Those soldiers who made it to the beach were unprotected as they faced the Turkish guns. The Anzacs managed to secure the beach and made limited progress up the cliffs and inland.

Although the plan had been to take 7 kilometres of territory, the day ended with barely a single kilometre achieved. More than 600 Australian soldiers were killed on the first day of the campaign. On hearing news of the disastrous landing, the British commander of the campaign, General Sir Ian Hamilton, ordered the troops to 'dig, dig, dig until you are safe'.

Hamilton's decision to persist with the campaign was supported by news of the success of the Australian submarine *AE2*. On 25 April 1915 (the same day as the landing), the *AE2* became the first Allied warship to penetrate the Dardanelles. It attacked a Turkish gunboat but was eventually discovered on 30 April and destroyed.

In May 1915, the Turks launched a great counter-offensive to take back the territory taken by the Allies, but were driven back.

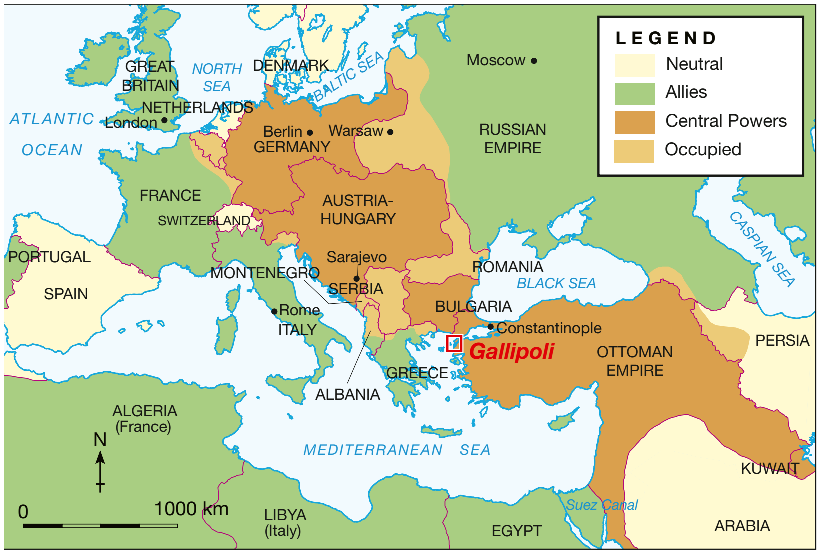
Source 2



It is stated in messages from Cairo that the majority of wounded who have arrived there deny the stories of Turkish atrocities. They state that the Turks are fighting most fairly. In one case, a Turk dressed the wounds of a British soldier under fire. Another left his water bottle with a wounded Australian. An Australian who was taken prisoner, but subsequently escaped, stated he was very well treated.

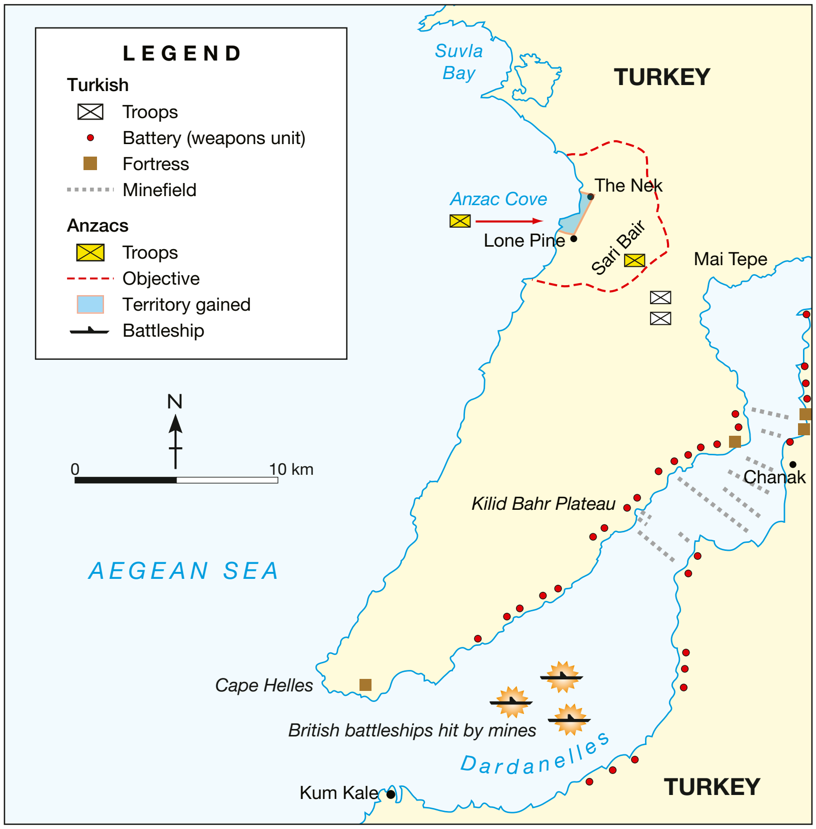
An extract from the
Melbourne newspaper
The Argus, 22 June 1915

ALLIANCES IN EUROPE AND THE MIDDLE EAST


LEGEND
Neutral
Allies
Central Powers
Occupied
GREAT BRITAIN
NORTH SEA
DENMARK
BALTIC SEA
Moscow
NETHERLANDS
London
ATLANTIC OCEAN
Berlin
GERMANY
Warsaw
RUSSIAN EMPIRE
FRANCE
SWITZERLAND
AUSTRIA-HUNGARY
CASPIAN SEA
PORTUGAL
Sarajevo
ROMANIA
MONTENEGRO
BLACK SEA
SPAIN
SERBIA
Rome
BULGARIA
ITALY
Constantinople
Gallipoli
OTTOMAN EMPIRE
PERSIA
GREECE
ALBANIA
ALGERIA (France)
N
MEDITERRANEAN SEA
KUWAIT
0
1000 km
LIBYA (Italy)
Suez Canal
EGYPT
ARABIA

Source 3 Source: Oxford University Press

DETAIL OF THE GALLIPOLI PENINSULA


LEGEND
Turkish
Troops
Battery (weapons unit)
Fortress
Minefield
Anzacs
Troops
Objective
Territory gained
Battleship
Suvla Bay
TURKEY
Anzac Cove
The Nek
Lone Pine
Sari Bair
Mai Tepe
N
0
10 km
Chanak
Kilid Bahr Plateau
AEGEAN SEA
Cape Helles
British battleships hit by mines
Dardanelles
Kum Kale
TURKEY

Source 4 Source: Oxford University Press

In August 1915, the Australians and New Zealanders launched two famous diversionary attacks – the Battle of Lone Pine and the Battle of the Nek. The Australians captured Lone Pine, in fighting so fierce that seven Victoria Crosses were awarded to their men. At the Nek, a charge by Australian troops cost the lives of 234 in an area about the size of three tennis courts.

Despite these battles, the situation on Gallipoli remained largely unchanged for the eight months of the campaign.

Over this time, respect grew between the Turkish soldiers and the Anzac troops on the battlefield. Each side saw the other as honourable, and agreements were made to hold fire and bury the dead respectfully (see Source 2). Both sides had an amnesty (agreement) to enable a number of dead Turkish soldiers to be buried under the Red Crescent flag of their nation. Over time, the two sides even began trading with each other.

Conditions at Gallipoli

Conditions at Gallipoli were extremely difficult for the Anzacs. As the Turks held the high ground, the Anzacs were always exposed to enemy fire. Nowhere was safe. They were in constant danger day and night, from snipers (expert shots) or artillery bombardment from the Turkish guns.

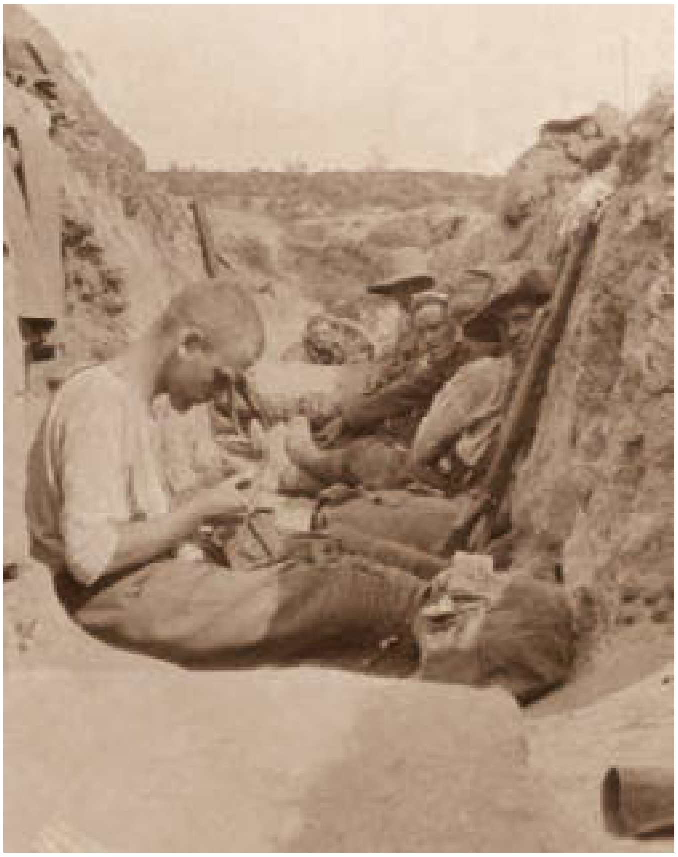
The Allies landed in the Turkish spring, and a sweltering summer followed. When winter arrived, the bitter cold and snow took its toll on the troops. For men used to the mild weather conditions in Australia, the icy north wind and snowfalls cut right through protection offered by their uniforms and light blankets. Frequent rainfalls flooded the trenches and turned the battlefields to mud.

Despite the rain and snow, drinking water was in short supply. It had to be shipped in to the troops, and this could be difficult if a supply ship ran into problems. Water was rationed carefully and soldiers were so conscious of the shortages that they often shaved with leftover cold tea. Food was more plentiful, although lacking in variety. Rations commonly included canned meat, corned beef (called 'bully beef') and hard biscuits. Fresh food was rarely available.

Poor health was a major problem. More Australians and New Zealanders died or were forced into hospital as a result of disease rather than enemy action. Painful conditions and diseases such as trench foot, dysentery, diarrhoea and gastroenteritis were common in the damp conditions of the trenches. Illness was also spread by rats, lice, flies and mosquitoes. Many pests were attracted by the strong odour of decomposing bodies and human waste. Poor sanitation and food-handling practices meant the germs were often transferred to food and water supplies.

Source 5

> We landed on Gallipoli in what we were wearing and continued to wear it day and night until the socks were the first garments to become unwearable, and they were cast out and we went barefoot in our boots.
>
> There were parasites which caused an abominable itch to which ever part of the skin where they operated. They lived and bred mainly in the seams of the inner garments and as there was no hot water or chemicals available for their control or destruction the field was open for them to multiply and flourish. The best control means available was to wear the clothing inside out and then there were no seams next to the skin for the pest to hide away in and breed. This I did with my flannel shirt, but I simply could not come at wearing my trousers inside out, even though many of the other men did. It simply looked too awful.
>
> An extract from a letter that Lieutenant Frank Boyes wrote about conditions at Gallipoli



Source 6 Australian soldiers resting in a trench at Gallipoli

Withdrawal

In December 1915, the Anzacs were finally ordered to withdraw from Gallipoli. To hide the fact that they were leaving, they rigged up some rifles to fire at random. They did this by attaching tins to the rifles' trigger mechanisms with string. When the tins filled with water dripping from other tins suspended above, their weight caused the triggers to be pulled and the rifles to fire. This tactic became known as the 'ghost guns of Gallipoli'. Soldiers also carefully wrapped the horses' hooves in cloth to muffle the sound of their leaving. The last Australian soldiers were evacuated overnight on 19–20 December. Because of its efficiency, the silent withdrawal is usually remembered as the most successful part of the Gallipoli campaign.

Over the course of the campaign, 8709 Australians died, and 19 000 were wounded. Over the same period, over 80 000 Turks were killed. During their time on Gallipoli, the '**diggers**' – as Australian troops became known – displayed a courage and ingenuity that would form the basis of the Anzac legend. This legend would contribute to the Australian sense of identity over the course of the 20th century.

The Australian Light Horse

Following the withdrawal from Gallipoli, the Australian infantry were deployed to the Western Front in France and Belgium. However, the mounted troops remained to continue fighting against the Turks in Egypt. They became involved in what was known as 'the Sinai and Palestine campaign'.

The Australian Light Horse was a combination of cavalry and mounted infantry that had been developed during the Boer Wars in Africa (1899–1902). Traditional cavalry forces were becoming obsolete as nations developed more powerful infantry and artillery weapons. However, Australia's vast distances made military leaders reluctant to do away with mounted soldiers. The answer was a mounted force of trained infantry soldiers who would ride swiftly into battle, but fight on the ground like regular infantry. Australian mounted troops made a significant contribution to the defeat of Turkish troops in the Middle East.

The most famous battle fought by the Light Horse was the Battle of Beersheba in October 1917. The charge was aimed at capturing the important Turkish base of Beersheba, and has been called the last successful cavalry charge in history (see Source 7).

Check your learning 9.10

Remember and understand

1 What does the term 'ANZAC' stand for?

2 What was the outcome of early attempts by Allied forces to pass through the Dardanelles?

3 Where was the Australian infantry (soldiers who fought on foot) deployed to after the Gallipoli campaign? What happened to members of the Australian Light Horse (soldiers who fought on horseback)?

Apply and analyse

4 Write a paragraph explaining why the Gallipoli campaign was ultimately unsuccessful.

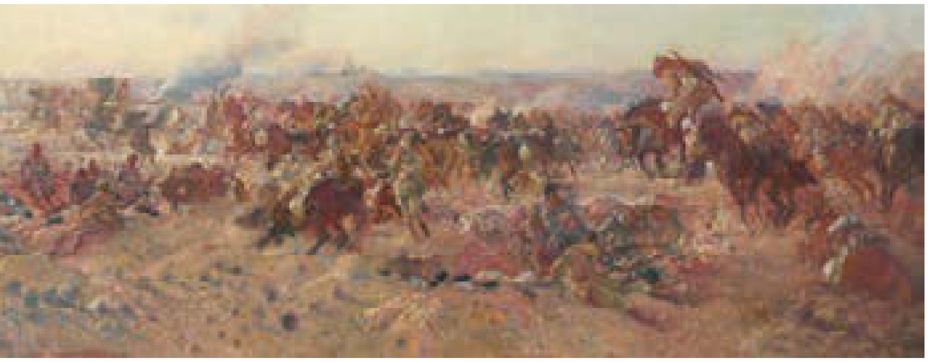
5 Why do you think the Anzac soldiers earned high praise, even though they did not achieve what they hoped to?

6 Explain why some people argue that the withdrawal of the Anzacs from Gallipoli was the most successful part of the campaign.

Evaluate and create

7 Do you think the Gallipoli landing and the Anzac legend would have become as central to Australian culture and folklore if it had not been the nation's first experience of war? Explain your answer.

8 Draw a sketch of the beach at Anzac Cove where the troops landed during the Gallipoli campaign (see Sources 1 and 4). Label your sketch, and highlight the difficulties that the soldiers faced on arrival.



Source 7 *The Charge of the Australian Light Horse at Beersheba, 1917*, George Lambert (1920)

9.11 The end of the war

After the failure of the Gallipoli campaign, the stalemate on the Western Front dragged on through 1916, 1917 and into 1918 with little change. By early 1918, troops on both sides were exhausted, resources were depleted and morale was at rock bottom. For the original Anzacs who had enlisted with such enthusiasm in 1914, there was a feeling that the war would never end.

The USA's involvement

Although the USA did not declare war on Germany until 1917, it had been involved in the war from the beginning, supplying the Allies with weapons and supplies.

After German submarines sank ships carrying American civilians, Americans were outraged and put pressure on their government to enter the war. US President Woodrow Wilson (see Source 1) initially campaigned for a peaceful end to the war, but was unsuccessful. When the Germans announced in March 1917 that they would continue to sink any ship that approached Britain, including passenger ships carrying civilians, this was the catalyst for the USA to finally intervene.

On 3 April 1917, President Wilson made a speech declaring that the USA would enter the war and restore peace to Europe. Three days later, they officially declared war on Germany. American troops joined the French and British in the summer of 1918.

Russia's withdrawal

As the United States was entering World War I, Russia was getting ready to get out. In 1917, Russia became swept up in an internal revolution. The new communist government, wanting to focus on internal troubles, looked for a way to remove Russia from World War I. Negotiating separately from the rest of the Allies, Russia signed the Brest-Litovsk peace treaty with Germany on 3 March 1918.

With the war over against Russia, Germany was able to divert its troops in the west in order to face the new American soldiers.

Events on the Western Front

The freshness and enthusiasm of the American troops made a huge difference to the Allied troops on the Western Front. After years of almost constant defeat and huge numbers of casualties, by early 1918 the Allies had begun to slowly gain the upper hand over the Central Powers (Germany, Austria–Hungary, the Ottoman Empire and Bulgaria).

The Battle of Le Hamel

In July 1918, Australian and American soldiers launched an attack on the Germans in and around the town of Hamel in northern France. The battle was planned and commanded by an Australian by the name of Lieutenant General John Monash.

The Battle of Le Hamel in July 1918 was said by some to be the most well-prepared battle in World War I. General Monash distinguished himself by developing and using innovative tactics for coordinated infantry, artillery, tank and aircraft attacks. This meant that Allied battle objectives were achieved in 93 minutes. Using conventional tactics would have meant that the fighting would have lasted for weeks, with much higher casualty rates.

The Battle of Amiens

The Battle of Amiens, which began on 8 August 1918, was an important event because it would come to mark the final offensive by the Allies before bringing the war to an end. Allied forces advanced over 7 miles on the first day and, from then on, German defences were continually penetrated and forced to retreat. For this reason, the first day of the battle is often referred to as the 'Black Day for the German Army'.

Source 1 US President Woodrow Wilson

O.MOTTRAM
SHARP BROS

Source 3 Armistice Day celebrations in Hay Street, Perth, on 11 November 1918

This battle also marked the end of trench warfare on the Western Front, as fighting became mobile once again.

On 26 September 1918, from their retreated position at the Hindenburg Line, the Germans were infiltrated by the Allies in only hours. German commanders began accepting that defeat was imminent.

The Armistice

At 5 am on 11 November 1918, the head of the German delegation, Matthais Erzberger, signed the **Armistice** (ceasefire) that marked the end of 'the war to end all wars'.

The terms of the Armistice were written by French Marshal Ferdinand Foch, and required the Germans to withdraw troops, surrender artillery, trucks, aircraft and naval vessels, return prisoners of war, and make promises about repatriation (repaying the costs of the war). The Armistice also stipulated that the fighting was to end later that day, at 11 am Paris time (i.e. the 11th hour of the 11th day of the 11th month). The news was quickly given to the armies during the morning of 11 November, but even after hearing that the Armistice was due to start at 11 am, intense warfare continued right until the last minute.

While the Armistice put an end to the fighting, it was initially only to last for 30 days and it did not determine how peace could be secured and maintained. The ceasefire was made permanent the following year when members of the Commonwealth and the League of Nations signed the Treaty of Versailles. The treaty (a binding agreement) was the official document that ended World War I and outlined the terms of surrender between the victorious Allies (including Australia, Britain and the USA) and the defeated Central Powers (including Germany, Austria–Hungary and the Ottoman Empire).

News of the Armistice spread quickly around the world. People celebrated by dancing and singing in the streets. But at the same time as people celebrated, many were also overcome with sadness and horror as they reflected on the millions of soldiers who had lost their lives, or the many more who returned home with physical and mental scars.

Check your learning 9.11

Remember and understand

1 In what ways was the USA involved with the war before their official entry into it in 1917?

2 What event finally triggered the USA into declaring war on Germany?

3 When and why did Russia withdraw from the war against Germany?

Apply and analyse

4 How and why did the entry of American troops into the war on the Western Front contribute to the defeat of the Germans?

Evaluate and create

5 Even after the Armistice was signed at 5 am on 11 November 1918, there were many more casualties later that morning before the official ceasefire at 11 am. For each of Britain, France, the USA, Canada and Germany conduct some research to find out:

   a What was the name of the last soldier killed?
   b What time did they die?
   c How and why were they killed?

Present your findings in a short report.

9B rich task

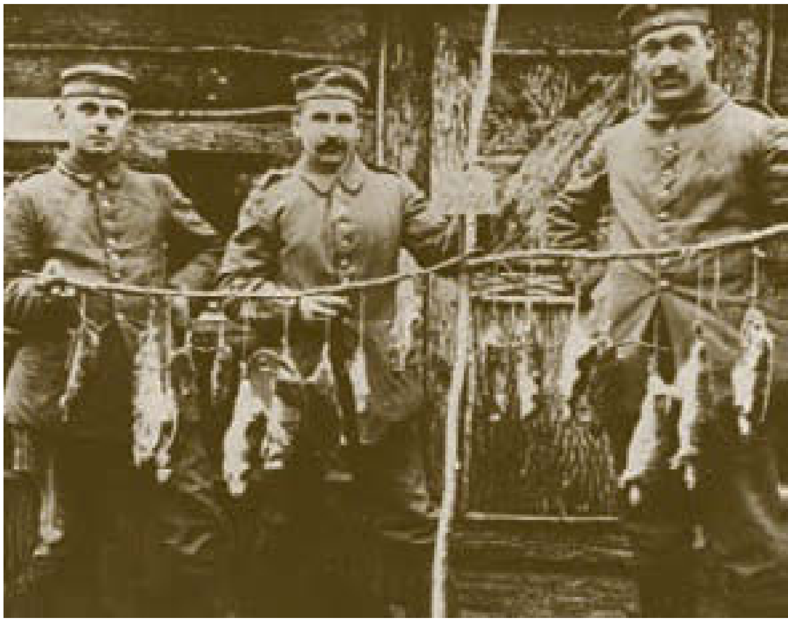
Life in the trenches

The trenches that soldiers dug during World War I were typically around 2 metres deep by 2 metres wide. On both sides, conditions were barbaric, although German trenches tended to be better engineered and more comfortable than the French and British equivalents. To avoid snipers (marksmen trained to 'pick off' enemy soldiers from concealed locations), soldiers spent most of the daylight hours under the trench line – most attacks took place at dusk or in the early morning when visibility was poor. Soldiers were often bored during the day, and caught brief moments of sleep where they could. Those falling asleep on watch could be severely punished.

The soldiers had to share the trenches with millions of rats (see Source 1) that fed on the remains of dead soldiers left on the battlefields. With so much available food, some rats grew to be as large as cats. They bred constantly and spread disease as they ran over the faces of the sleeping soldiers.

Lice were also constant companions that lived and laid eggs in the seams of the soldiers' uniforms. The troops were often unable to bathe or change their clothes for weeks at a time. Even when washed, it was almost impossible to rid clothes of the lice eggs. Lice were responsible for the spread of 'trench fever'. If soldiers were fortunate enough to end up in military hospital, it took them up to 12 weeks to recover from this painful illness.

Relentless rain turned the trenches to canals of stagnant mud. Trench foot, acquired from standing for long periods in wet, muddy conditions, was a fungal infection that caused swelling. Serious cases could result in amputation. The winter of 1916 was one of the harshest on the Western Front. The cold was so intense that water was carried to the troops as blocks of ice.



Source 1 German soldiers display the result of a night's rat-catching in a trench on the Western Front.

Source 2

We are lousy, stinking, ragged, unshaven, sleepless. Even when we're back a bit we can't sleep for our own guns. I have one puttee [fabric strip wound around the lower leg for protection], a dead man's helmet, another dead man's gas protector, a dead man's bayonet. My tunic is rotten with other men's blood and partly splattered with a comrade's brains. It is horrible but why should you people at home not know.

Excerpt from a letter written to his family by John Alexander Raws, a South Australian soldier, who spent only four weeks on the Western Front before he was killed on 23 August 1916

Source 3

Enormous noise. Continuous explosion. A deserted landscape. Complete immobility of everything. Men were eating, smoking, doing odd jobs but no one was fighting. A few were peering in periscopes or looking through loopholes. I tried, but could see nothing but upturned empty fields. Then suddenly there was a terrific crash which flung me yards. I picked myself up and did my best to laugh. Nearby a man lay with a tiny hole in his forehead and close to him another limped with blood pumping out of his leg. They were both carried away. A casualty was not a matter for horror but for replacement. I regarded the incessant bombardment as temporary and expected every moment to see men going over the top to put the guns out of action. Nothing happened, however. That was how I first saw war.

RH Mottram, from RH Mottram, John Easton and Eric Partridge, *Three Personal Records of the War,* Scholartis Press, London, 1929

skill**drill**

Identifying and locating relevant sources, using ICT and other methods

Being able to locate relevant primary and secondary sources using the Internet is an important historical skill. However, you need to keep in mind that not all information you find on the Internet is necessarily true, accurate, reliable or credible. So, in addition to being able to find source material online, you need to be able to evaluate the reliability and credibility of the information you find.

Use the following steps to apply this skill:

Step 1 Identify key words related to your topic and type these into a search engine such as Google. (Use only these key words – do not type in whole sentences or questions.)

Step 2 Add further relevant key words to refine your search if you cannot find what you want on your first attempts.

Step 3 Look beyond the first page of results. The best results do not always appear first.

Step 4 Assess the reliability of each site by asking yourself:

- Who is the author or creator? If it is an individual, do they have their credentials listed (e.g. a degree or title)? If it is an organisation, is it a reputable organisation like a government or university department?
- What is the purpose of the website? Is it trying to inform, persuade or sell?
- Is the site objective? Is the author's point of view biased?
- Is the information accurate? Can the information be verified if you cross-check it with other sources of information?
- Does the site contain spelling mistakes or grammatical errors? (If so, this is usually an indication that the site is not particularly reliable.)
- Is the information current? Can you find evidence of recent updates?

Apply the skill

1 Conduct an Internet search to find relevant, credible and reliable source material about life in the trenches during World War I using the steps outlined.

2 Copy the data chart below into your workbook. Read the source material you have located and record the key points in the appropriate column. Make sure you also record the URLs of the sites you have used.

Life in the trenches – data chart

	URL	Food, clothing and shelter	Hygiene	Entertainment	Mateship	Injury, death and medicine
Source 1						
Source 2						
Source 3						
Source 4						

Extend your understanding

1 Read the letter written from the trenches by John Raws (Source 2).

  a Why do you think he felt that people at home should know what he was going through?

  b What impact do you think such letters would have had on the views of war at home? Suggest several responses.

2 Use the text and sources included here, as well the notes you have recorded in the data chart as a result of your research, to write three brief diary entries from the perspective of a soldier that describes life in the trenches. Write one diary entry about a calm period, another about a bombardment, and the final diary entry about the lead-up to 'going over the top'.

9.12 The impact of war on Australian society

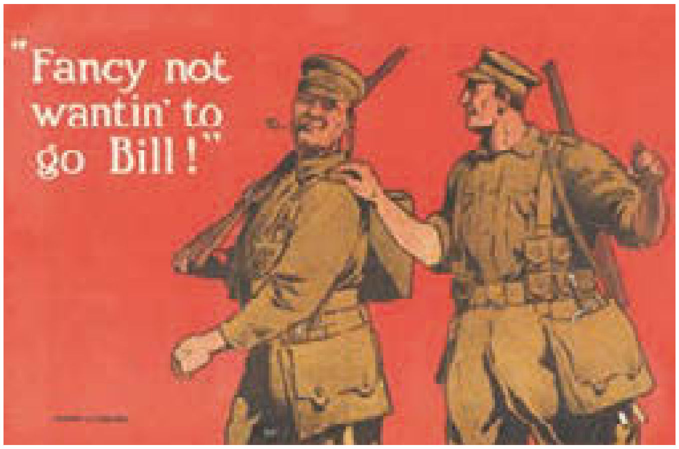
World War I had a significant impact on Australian society. A young nation with a population of less than five million in 1914 lost over 60 000 young men as a result of the war. Many of these men were the fittest and most able of the male population. As a percentage of total troops sent to war, Australia's losses were the highest of any of the Commonwealth nations (see Source 2). A summary of the numbers of those who served and of the numbers of deaths and other casualties makes it clear that Australia made a major sacrifice for the Allied war effort.

The initial enthusiasm with which most Australians greeted the outbreak of war did not last. By the middle of 1915, the reality of war began to dawn. Following the landing at Gallipoli, Australians received the news of more than 2000 deaths. As a result, many in the nation took a more sober view or became disillusioned. There was still strong support for the war and the soldiers, but any excitement had evaporated.

By late 1916, Australia was a bitterly divided country. Not only was there a growing dissatisfaction with the war, but a real sense that there was 'inequality of sacrifice'. Many working-class Australians felt that they had contributed the most in terms of enlisting soldiers, and that they were also being exploited at home. There was a perception that middle- and upper-class people were less affected by the war. Some were even seen to be profiting from lucrative government war contracts. These perceptions were not always accurate, but they still had an impact on the growing divisions in the nation.

The War Precautions Act

In 1914, the federal government passed the War Precautions Act, which gave the government increased powers for the duration of the war. This Act gave the federal government the legal right to, among other things, monitor and **intern** German–Australians, impose a direct income tax, censor letters and publications, and set fixed prices for certain goods.


"Fancy not wantin' to go Bill!"

Source 1 An Australian poster from 1917 encouraging Australians to enlist. After heavy casualties on the Western Front, Britain pressured Australia to make a bigger contribution to the war effort.

Source 2 A comparison of British Commonwealth casualties, World War I

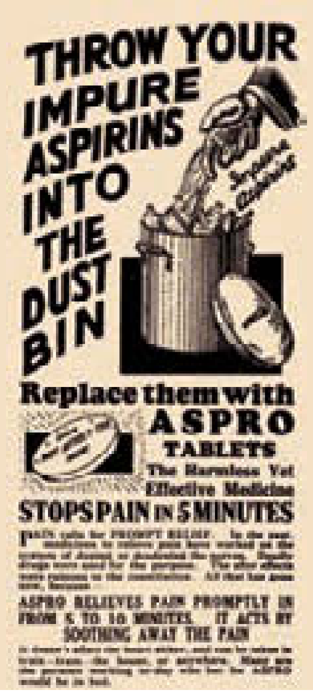
Country	Total soldiers sent to war	Total casualties (captured, missing, wounded or killed)	% of casualties
Britain	5 000 000	2 535 424	50.71
Canada	422 405	210 100	49.74
Australia	331 781	215 585	64.98
New Zealand	98 950	58 526	59.01
India	1 096 013	140 015	12.77

Statistics from *Australian Campaigns in the Great War*, Lt The Hon. Stanisforth Smith

Impact on the Australian economy

World War I had a major economic impact on Australia and other nations. The cost of providing weapons, ammunition and supplies to the forces at home and overseas was vast. To meet these expenses, the federal government introduced income tax. It was also necessary to borrow funds from overseas. Australia borrowed heavily from Britain to build vital wartime infrastructure, such as expanded railways. Australia would take over 20 years to pay back loans taken out during the war.

The redirection of raw materials to the war effort and the needs of wartime industries caused **inflation**. As a result, the cost of living in Australia rose by up to 50 per cent during the war years. The war also disrupted international trade. Naval blockades and the use of shipping for military purposes meant fewer ships were available to move trade goods to overseas markets. The Australian government had introduced tariffs (taxes) on imported goods to protect its local wartime supplies. Many countries looked elsewhere for trade and discovered new sources in Japan and the USA.


THROW YOUR IMPURE ASPIRINS INTO THE DUST BIN

Replace them with ASPRO TABLETS

The Harmless Yet Effective Medicine

STOPS PAIN IN 5 MINUTES

ASPRO RELIEVES PAIN PROMPTLY IN FROM 5 TO 10 MINUTES. IT ACTS BY SOOTHING AWAY THE PAIN

Source 3 Aspro was developed in Australia as a direct result of the war.

Source 4 Wool, used to make soldiers' uniforms, was a valued commodity during the war.

On the positive side, however, Australia developed new industries. The fact that fewer goods could be brought in from overseas meant that inventive Australians began to develop alternatives that were made here. By the end of the war, 400 new products were being manufactured in Australia. The Newcastle steelworks, opened in 1915, was flourishing, the Australian National Shipping Line had been established and the role of the Commonwealth Bank expanded considerably.

One new product, developed as a direct result of the war, was a medication called Aspro (see Source 3). Before the war, aspirin (which at the time was a trademarked German-made pain reliever called Aspirin) had been widely used for pain relief in Australia. After the outbreak of war, the use of Aspirin became unpopular and unpatriotic because it was made by the German company Bayer. Two Australian pharmacists, George Nicholas and Henry Smith, analysed Aspirin and came up with an Australian version, which they called Aspro. Aspro became one of the most widely used over-the-counter medicines available in Australia.

There were people who profited from supplying goods needed for the war effort. These included farmers who supplied wheat, dairy products and meat to feed the soldiers here and overseas. Wool was in great demand for soldiers' uniforms (see Source 4) and munitions factories were working overtime to support the war effort.

However, many workers felt that they were not sharing in the wartime profits. Wages fell but the cost of living rose. This led to some resentment and even strike action in the coal industry, and on the railways and the wharves. These strikes drew much criticism. The strikers were described as unpatriotic and selfish, and they were largely unsuccessful.

Check your learning 9.12

Remember and understand

1 How many Australian men died in World War I? How does this figure compare with the losses suffered by other Commonwealth nations?

2 What were some of the factors causing division in Australian society by 1916?

3 What did the Australian federal government do in order to cover the great cost of the war effort?

Apply and analyse

4 Explain how the war influenced Australian manufacturing.

Evaluate and create

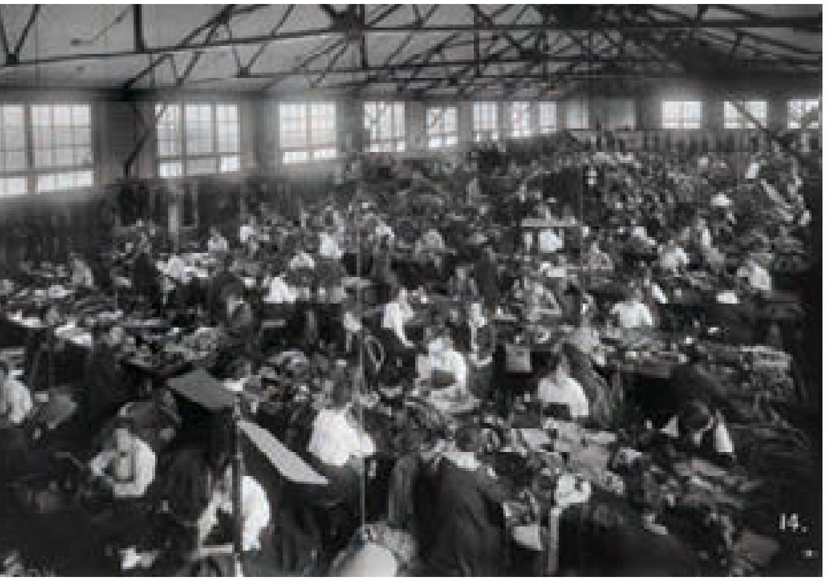
5 Aspro was developed because Bayer Aspirin was no longer imported from Germany. Research other products that were imported from Germany and Austria before the war to see if the bans placed on them led to the development of Australian alternatives.

9.13 The impact of war on Australian women

Historians often describe World War I as the first 'total war', because it was the first time that nations had mobilised all of their industries, resources and citizens for the war effort. Before World War I, most people's involvement in wars was usually limited to paying taxes and worrying about friends and family members engaged in fighting overseas. By comparison, 'total war' placed many new pressures on those left at home.

With so many men away at war, there was an expectation that women would take on many duties that had previously been the responsibility of men. Women did a great deal of voluntary work, including fundraising and assisting with recruiting. They also moved into previously male domains in the workforce, such as working in munitions factories. In Britain, women were also able to join the armed forces, but only for home defence.

Most women were supportive of involvement at the start of the war and more than 2000 served, generally as nurses. While these women faced dangerous conditions overseas, the women on the home front also found their lives changing.



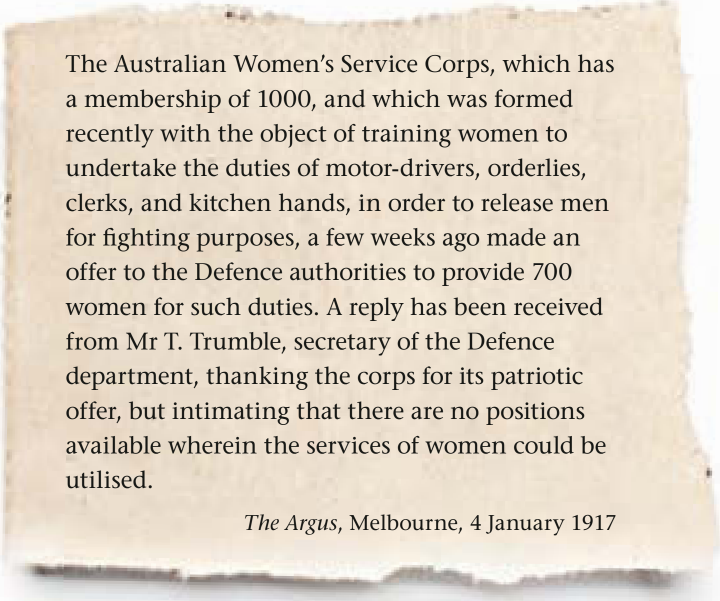
Source 1 This photograph, taken in 1915, shows women making uniforms at the Commonwealth Clothing Factory in Melbourne. Women were offered better working conditions and wages here than those offered by private employers, but they were also expected to work extremely hard for the war effort.

Women in the paid workforce

Before the war, most women had been homemakers, with a small number working in traditionally female roles such as teaching, nursing, dressmaking or domestic work. However, with around 500 000 young men off at war, women wanted to support the war effort at home. There was some resistance by trade unions to hiring women in traditionally male jobs, as it was thought that this might lower wages. However, women were able to take on some traditionally male roles, such as store clerks and bank tellers. The government controlled war-related work and women were rarely able to gain jobs in these areas.

The Australian Women's Service Corps was formed with the aim of training women to take over male jobs in the services at home, to free more men to fight overseas. However, women were told that their services were not necessary.

Source 2



The Australian Women's Service Corps, which has a membership of 1000, and which was formed recently with the object of training women to undertake the duties of motor-drivers, orderlies, clerks, and kitchen hands, in order to release men for fighting purposes, a few weeks ago made an offer to the Defence authorities to provide 700 women for such duties. A reply has been received from Mr T. Trumble, secretary of the Defence department, thanking the corps for its patriotic offer, but intimating that there are no positions available wherein the services of women could be utilised.

The Argus, Melbourne, 4 January 1917

By the end of the war, the percentage of women working outside the home had risen by about 13 per cent. However, there was an expectation after the war had finished that women who had taken on the traditional roles and jobs of men would return to the home, making way for returned soldiers.

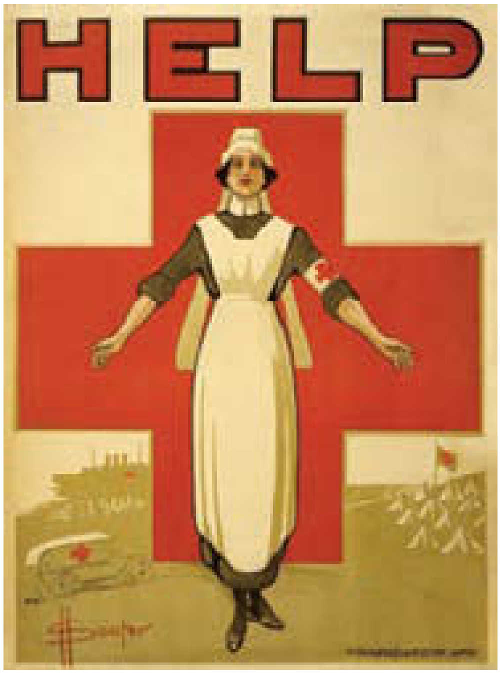
Women's voluntary work during the war

During World War I, women were strongly encouraged to help the war effort by joining voluntary organisations. Vast numbers of women and girls sewed and knitted to ensure that the troops had warm clothing, and raised money to help those affected by the war.

Women who took on voluntary work developed skills and confidence. For many women, especially younger ones, these opportunities helped to shape their lives as the nation moved into the 1920s.

Australian Red Cross

After it was founded in Melbourne in 1914, the Australian Red Cross grew to have branches in every state of Australia. Women volunteering for the Red Cross attended working bees where they made packages for the men serving overseas. These packages included things like soap, toiletries, food, clothing and medical supplies. The Red Cross also raised money to assist soldiers' families, and established homes for wounded soldiers to recover in.



Source 3 Australian Red Cross poster, 1914–18

Australian Comforts Fund

The Australian Comforts Fund was established in 1916. Their main goal was to raise money, which they used to provide 'comfort boxes' for the soldiers. These boxes contained things like knitted socks, pyjamas and cigarettes.

Women and recruitment

Women were also active in influencing and encouraging men to enlist. Some women refused to speak to men who had not enlisted. Other women sent white feathers, a symbol of cowardice, to men who had not enlisted.

Images of women were regularly used in posters published by the government to encourage recruitment. Women were portrayed as 'helpless and vulnerable victims', in need of Australian soldiers to protect them from the 'evil Germans'.

Other women encouraged men not to enlist. Vida Goldstein, for example, was a Melbourne woman who actively promoted pacifism (opposition to war) and formed the Women's Peace Army in 1915.

Check your learning 9.13

Remember and understand

1 What roles were open to Australian women during World War I?

2 Describe some of the main activities of the volunteer organisations that existed to help the war effort.

Apply and analyse

3 Why do you think the offer of the Australian Women's Service Corps was rejected?

Evaluate and create

4 Put yourself in the role of a business operator during World War I. When one of your male employees enlisted, you employed a young woman who has proved to be excellent. You have spent time and money developing her skills and knowledge. When your former employee returns from the war, he expects to be re-employed. He has lost a leg and is suffering from shell shock. You have to decide what to do. You cannot afford to employ them both.

- **a** On a sheet of paper, write all the arguments for sacking the woman and re-employing the man. On the other side, list the reasons in favour of keeping the young woman and telling the man to look for work elsewhere.
- **b** Decide which candidate you should employ to fill the position. Write a letter to the unsuccessful candidate explaining your decision and outlining the reasons for it.

9.14 The conscription debate

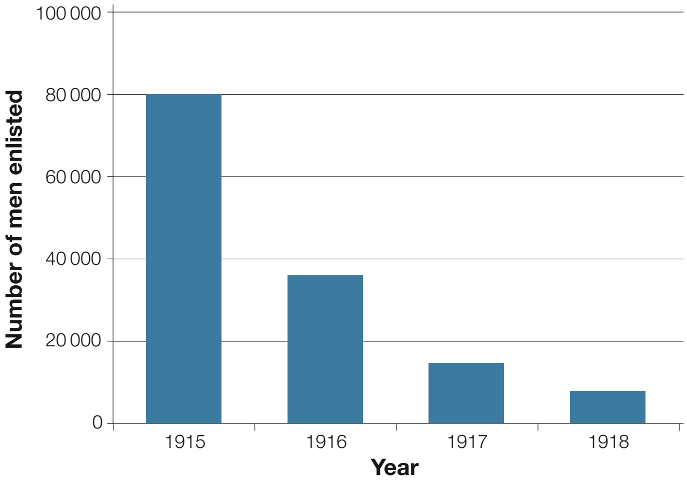
Despite the changes brought about in Australia by World War I, it did not impact on the Australian home front to the same degree as in France, Belgium, Italy, Russia, Turkey and Britain, where fighting took place. In these countries, civilians suffered through food shortages and regular military attacks. Because of the immediate danger faced, all of these countries had systems of conscription (compulsory service in the army) during the war. In Australia, however, service was not compulsory. This did not stop it from becoming one of the most divisive and bitter arguments of the war.

Enlistment

When the war began in 1914, many Australian men saw participation in the war as an exciting and noble cause. Men flocked to enlist as most expected the war to be over quickly. But as the war dragged on and information about the number of deaths and casualties emerged, volunteer numbers began to drop. Although there was a peak in enlistments after Gallipoli, from late 1915 numbers steadily declined.

As the numbers of men enlisting declined, the Australian Government tried to pressure men to enlist through propaganda campaigns that either encouraged or shamed men into enlisting. The process of asking people to enlist is called recruitment.

Recruitment became an issue when the Australian Prime Minister William Morris (Billy) Hughes returned from a visit to Britain and the Western Front in 1916. Over 27 000 Australian soldiers had just been killed in the first five weeks of the Battle of the Somme in July 1916. Due to the decline in the number of Australian volunteers, heavy Australian losses and the critical state of the war on the Western Front, Hughes announced that there would be a referendum (a special national vote) to give the Commonwealth Government the power to force men of military age to join the army.



Source 1 Enlistments in the First AIF 1915–18

Source 2 William Morris (Billy) Hughes

Hughes believed that Australia needed at least 7500 men to enlist per month if it was to maintain its fighting strength. To achieve this, he announced that we needed to introduce conscription. This was despite the fact that only a year earlier he had declared, 'In no circumstances would I agree to send men out of this country to fight against their will.'

The conscription plebiscites

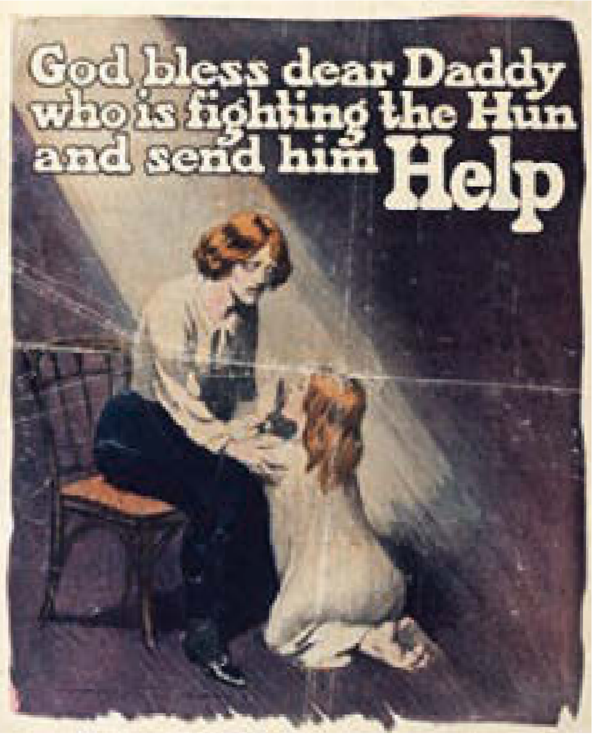
The issue of conscription triggered a major debate around Australia. In October 1916, Australians were asked to vote for or against conscription in a **plebiscite** (a public vote or opinion poll). A plebiscite is similar to a referendum, but its outcome is not legally binding and does not result in a change being made to the **Constitution**. The 1916 plebiscite was narrowly defeated. Most of Hughes' Labor parliamentarians were opposed to conscription and, as a result, the Labor Party split. At the end of 1916, Hughes and 24 of his supporters left the Labor Party and formed a new party known as the Nationalist Party. The Nationalist Party was made up of Hughes and his supporters, along with most of the former members of the Liberal Party. One year later, in 1917, a second plebiscite was held. Again, it was defeated. Hughes could still have introduced conscription, because the results of the plebiscites were not legally binding, but he chose not to.

Australia divided

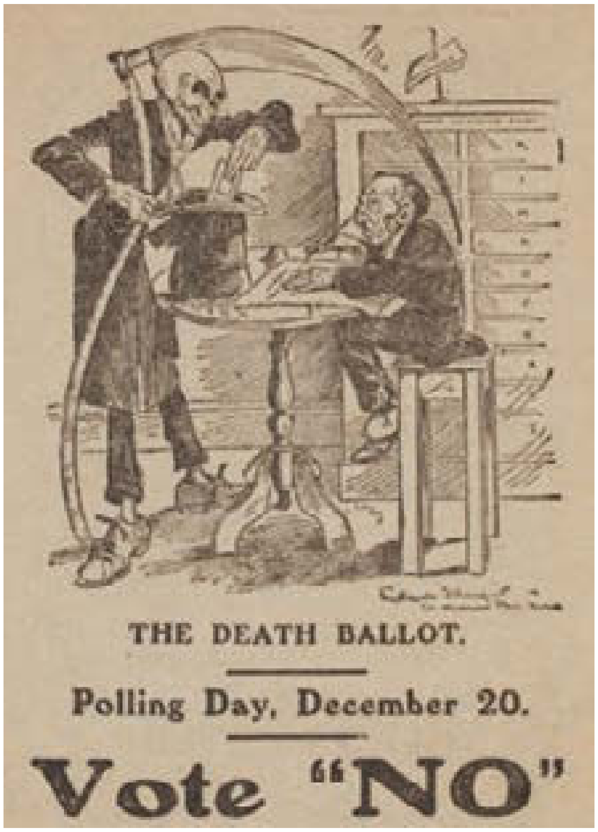
Supporters of conscription tended to be middle- and upper-class people of British and Protestant background. These people, known as pro-conscriptionists, argued that it was the patriotic duty of Australians to continue to support the war effort. They accused opponents of being lazy and selfish, of being 'German lovers' and of letting down the thousands who had already given their lives. In pro-conscription propaganda, images of noble Australian soldiers and their families are shown suffering for the good of the country as they fight the Germans.

Opponents of conscription were more likely to be working class, Catholic and of Irish background. Catholic Archbishop Daniel Mannix was the unofficial leader of the anti-conscription campaign and he urged Catholics to vote 'no'. Those who opposed conscription claimed that Australia had already given enough of its young men. They said that it was not really Australia's war. They also argued that several hundred thousand soldiers had gone voluntarily to the war and that it was not necessary to force Australians to fight. Anti-conscription propaganda urged people to vote 'no' in the plebiscite or 'Death Ballot' (see Source 4).

Many trade unionists opposed conscription, arguing that the war was a capitalist war and should not be supported. Some trade unionists also argued that if the majority of able-bodied Australian men were sent to the front, employers would begin to employ non-whites at lower wages, undermining the gains that Australian workers had made. Women were equally divided on the issue and were used by both sides of the campaign. Images of women and children frequently appeared in conscription propaganda (see Source 3).



Source 3 A pro-conscription poster produced in Australia around 1918. The word 'Hun' is a derogatory term being used here to refer to the Germans.


THE DEATH BALLOT.
Polling Day, December 20.
Vote "NO"

Source 4 An anti-conscription cartoon, printed in 1917, from the No Conscription Council Campaign Comittee

Check your learning 9.14

Remember and understand

1 Why do you think both sides of the conscription debate used women, especially mothers, in their propaganda?

Apply and analyse

2 Why do you think that Billy Hughes held two plebiscites when he had the power to introduce conscription without the nation's support?

3 Can you explain why middle- and upper-class people were more likely to support conscription than working-class people?

Evaluate and create

4 Do you think the war might have affected Australia differently if conscription had been introduced? Conduct some additional research and write a 250-word report to outline the possible effects of conscription on the war effort and the home front.

9.15 Anti-German sentiment in Australia

Throughout the second half of the 19th century, many Germans had settled in Australia. Most German settlers arrived in Port Adelaide, and then moved on to settle in areas such as the Barossa Valley (in South Australia), the Riverina (in New South Wales) and south-east Queensland. Many German immigrants found these regions suitable for wheat and dairy farming, the planting of vineyards and wine making. By 1914 over 100 000 people of German descent lived in Australia. Many of these had been granted full Australian citizenship before 1914, while others were second- and third-generation Australians. On the whole, German–Australians were a well-established and well-liked community prior to the outbreak of the war.

The outbreak of war

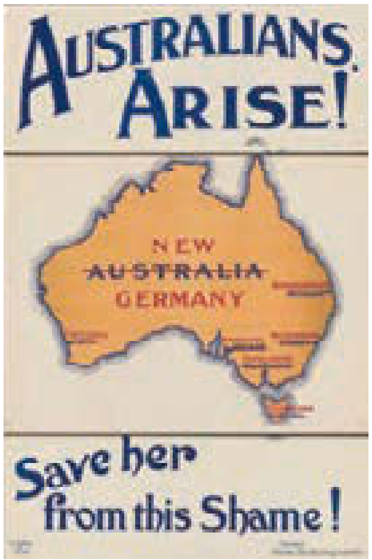
With the rising tension between the British and German Empires, German–Australian communities began to find themselves the subject of suspicion and hostility in Australia. When war broke out in 1914 this changed to outright aggression.

At the time, many German–Australians had come to think of themselves as Australian first. Indeed many of them enlisted in the AIF. For example, the first Australian commander of the AIF, General John Monash, was the son of German migrants.

However, when Australia and the rest of the British Empire were at war with Germany, German–Australians were considered potential threats to national security.

Many Anglo–Celtic Australians believed the German–Australians had divided loyalties or even that they were spies. Almost overnight, German–Australians became the target of hate campaigns. Propaganda and vicious rumours were circulated (see Source 1). Life became very difficult for anyone of German descent.

Two months after the war began, the Australian Government created more tension between British–Australians and German–Australians with the introduction of the War Precautions Act. The Act authorised the Commonwealth government to do whatever it felt necessary to secure the safety of the nation. This Act, together with later regulations and Acts, set out a number of restrictions on the lives of people of German descent. In particular, it specified that all '**enemy aliens**' (foreign residents from enemy nations) had to register and report weekly to local police stations or military authorities, pledge their allegiance to Australia and the British Empire, and inform the authorities of any change of address.


AUSTRALIANS ARISE!
NEW
~~AUSTRALIA~~
GERMANY
Save her from this Shame!

Source 1 This 1916 poster shows Australia renamed 'New Germany', and Australian cities given German names; such scare tactics were common during World War I.

Source 2 Holsworthy Internment Camp in Liverpool, New South Wales

Internment

Over the course of the war, nearly 7000 people were classified by the government as 'enemy aliens' and imprisoned in **internment camps**. Most of these people were of German or Austro–Hungarian descent who had been residents in Australia when the war broke out. Some had lived here for many years or had even been born in Australia. There were no hearings or appeals.

Initially, internment camps were set up all across Australia, but in July 1915, all internees were moved to camps in New South Wales. Here, the three main internment camps were at Trial Bay Gaol, Berrima Gaol and Holsworthy Army Barracks. Germans who were not placed in camps were carefully watched by the police and neighbours.

Hostility towards Germans in Australian society at the time was so strong that many people of German or Austrian heritage decided that life inside the internment camps would be preferable. Many of them had lost their jobs and could not feed their families. During the war, 1500 people chose to enter internment camps voluntarily.

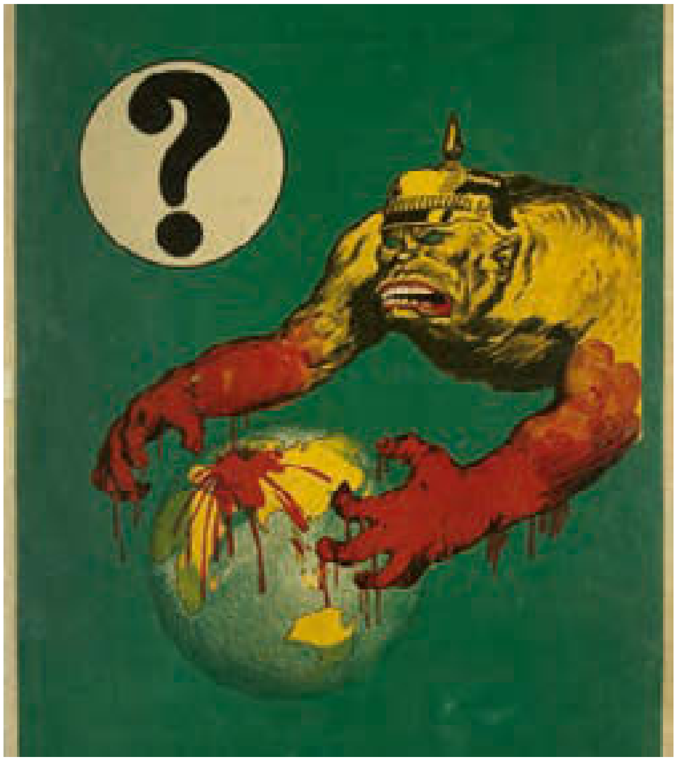
Other reactions to 'enemy aliens'

In response to the threat of German–Australians, the government closed down German schools and changed the names of towns that it thought sounded 'too German'. In New South Wales, Germantown became Holbrook; in Tasmania, the town of Bismarck became Collinsvale; and in Victoria, Mount Bismarck was renamed Mount Kitchener – after the British Field Marshal, Lord Kitchener. In Townsville, the German Gardens became the Belgian Gardens.

Many families of German descent changed their names to stop harassment from the government and a war-mad community. German schools and churches were closed, German music was banned, and German food was renamed.

After the failure of the second conscription plebiscite in 1917, the anti-German campaign was increased further. People of German descent were stopped from joining the army, and from holding civil positions such as local councillors or Justices of the Peace.

Many Australians also refused to work beside people of German descent, striking until they were sacked from their jobs. People refused to buy anything from German-owned businesses.



Source 3 Australian propaganda cartoons, such as this one by artist Norman Lindsay (published around 1915), did much to fuel anti-German sentiment in Australia. The cartoon shows a 'Hun' (a derogatory word used to refer to Germans) as a brutal ape-like monster reaching out to crush the world, the blood of its victims dripping from Europe down towards Australia.

Check your learning 9.15

Remember and understand

1 How many people of German descent were living in Australia at the start of World War I?

2 What were some of the suspicions held about German–Australians after war broke out? Who held these views?

3 What restrictions were placed on German–Australians as a result of the War Precautions Act?

4 Why did some German–Australians voluntarily enter internment camps?

Apply and analyse

5 Negative attitudes towards Germans, even those who were born here or were naturalised Australians, were widely held by British–Australians during World War I.
   - a How do you explain this reaction?
   - b Do you think the same reaction would happen today if Australia were at war with a country from which many Australian citizens had migrated?

9.16 The impact of war on Australia's international relationships

World War I had a significant influence on the growth of Australia as a nation; in fact, many historians describe it as 'our nation's coming of age'.

When World War I broke out in 1914, Australia was still a very young nation. Federation – the process by which six British colonies united to form the Commonwealth of Australia – had only taken place in 1901, so this was the first time Australia had ever committed its own troops and fought under its own flag (rather than the flag of Great Britain). To this day, World War I remains the most costly conflict ever for Australia in terms of the number of deaths and casualties suffered. In total, around 300 000 men enlisted from a total population of less than five million. Of these, more than 60 000 were killed and around 155 000 were wounded. As a percentage of total population, this meant that Australia's sacrifice was greater than that of any other country in the war. This sacrifice gave Australia a certain amount of influence and acknowledgement on the world stage that it had not had before the war.

Australia gets a seat at the table

After the war ended in 1918, the victorious Allied Powers met to discuss terms for the surrender of the defeated Central Powers. The talks, held in Versailles outside Paris, became known as the Paris Peace Conference. In 1919, Australian Prime Minister William 'Billy' Hughes travelled to Paris to attend. He was away for 16 months and at the end of this time signed the Treaty of Versailles on behalf of Australia – the first time Australia had signed an international treaty. Hughes' major achievement at the Paris Peace Conference was to gain a mandate (permission) for Australia to govern the former German colony of New Guinea. He also strongly supported arguments for severe reparations (penalties and fines) to be placed on Germany.

Source 1 Australian soldiers carry Australian Prime Minister Billy Hughes – fondly called 'the little digger' – along George Street, Sydney in triumph after returning home from the Paris Peace Conference.

Australia's relationship with Britain

World War I brought about many changes for Australia's relationship with Britain. The service of the Australian troops in the Middle East and on the Western Front earned high praise from the British military command. By the end of the war, Australia's relationship with Britain was still strong, but Australia was a little more independent.

This growing self-confidence was shown through Australia's contributions at the Paris Peace Conference (see Source 2). During the 1920s and 1930s other steps were taken towards independence. In 1931, the British parliament gave Australia the right to make its own foreign policy and trade treaties.

Despite these changes, loyalty to Britain remained strong. One way that this was shown was through responses to the many royal visits after the war. For example, in 1920, the Prince of Wales visited Australia and was greeted with enthusiasm everywhere he went.

When the Great Depression hit Australia in 1929, Prime Minister James Scullin initially relied on advice from Britain and the Bank of England. The close relationship with Britain was also reflected by Prime Minister Robert Menzies when he announced in 1939, 'Great Britain has declared war upon her (Germany) ... as a result, Australia is also at war.'

Australia's relationship with Asia

Prior to World War I, Australia did not have a very positive relationship with Asia. Instead, Australia's international relationships were heavily focused on Britain and countries in Europe. At the time, Australia also had very strict and discriminatory immigration laws towards people from Asia.

One of the outcomes of the Paris Peace Conference was the formation of the League of Nations – an international organisation designed to prevent future wars and promote peace. When the charter (founding statement) for the League of Nations was debated, Japan argued that a clause be added outlining 'the equality of all nations and fair treatment of all peoples'. Prime Minister Hughes argued strongly against this clause being added and was successful. The Japanese were offended by Australia's position on the issue and it strained relations for many years. Despite this, trade between Australia and Japan increased steadily (as it did with other Asian countries such as China).

In the 1930s, Japan began to flex its military muscle in Asia and expand its territory by force. As a result, Australia was forced to take a more independent approach to foreign policy. Australia's closeness to Asia meant that the government had to look at Australia's interests in its own region and respond to local events.

Australia's relationship with the USA

Prime Minister Hughes gained considerable respect from world leaders at Versailles, but not from everyone. Hughes was a demanding presence at the Conference and was able to secure a number of victories for Australia in the negotiations. Hughes often disagreed with US President Woodrow Wilson, who described him as 'a pestiferous varmint'.

Despite these tensions between Prime Minister Hughes and President Wilson at Versailles, relations between Australia and the USA were largely positive in the 1920s and 1930s. Australia began to increase its diplomatic relations with America and trade between the two countries also increased. After the war, there was also an increasing interest among Australians in American culture, especially films and music.

Over time, trade and military agreements with the United States led to Australia looking away from Europe and strengthening ties with the United States. Although the Australian government had extended military connections to the USA as far back as 1908, it was only in the lead-up to World War II that the United States came to be seen as a major ally of Australia.

Source 2 At the end of World War I, the leaders of the victorious Allied Powers met in Paris. This photograph of the Paris peace talks shows Australian Prime Minister Billy Hughes seated in the centre of the front row.

Check your learning 9.16

Remember and understand

1 What was the Paris Peace Conference and when was it held?

2 What was Prime Minister Hughes' major achievement at the Paris Peace Conference?

3 What was the League of Nations and what was it designed to achieve?

Apply and analyse

4 Why was Australia's relationship with Asian countries strained around the time of World War I?

5 Why did US President Woodrow Wilson describe Australian Prime Minister Billy Hughes as 'a pestiferous varmint'?

Evaluate and create

6 Despite increasingly close relationships with Asia and the USA, many Australians still support the idea of the British Queen as Australia's Head of State. Research the arguments for and against this issue. Conduct a class debate on the topic: 'Australia is mature enough to choose its own Head of State.'

9C rich task

Conscription

The issue of conscription was one of the most bitter and divisive debates in Australian history. Even though both plebiscites were defeated, and achieved no change at all, the impact on the nation was lasting. The issue divided friends, neighbours, workmates and even families. Well into the 1920s the scars of these bitter battles could be felt in the Australian community. Prime Minister Billy Hughes and Archbishop Daniel Mannix were two of the most important figures in the debate, with Hughes being the greatest proponent of conscription and Mannix being its loudest critic.

Source 1

Britain has raised, I say, an army and navy of over five million men. She has raised more than one-tenth of her total population. We have raised, at the outside, about one-twentieth…The time has come when (Australia) must do better…

Does anyone who loves his country… doubt that if Germany wins in this war she will lay her predatory hands on this country of ours? … Is there in the world a greater prize than Australia? … I tell you, and I am armed with knowledge, that our position is hopeless … We may say what we like, but once the Allies' line is broken in France… there is an end of us. Get that into your minds. But for the allied armies and the British navy we are doomed men. We may bleat and we may struggle, but we are like sheep before the butcher, and nothing can save us.

… Tens of thousands of our kinsmen in Britain have died that we might live free and unmolested. Is there one man who will say that we ought not to pay the debt we owe to Britain, with our lives if need be, for shielding our country with the bodies of her glorious soldiers and sailors from the scorching blast of war? Australians! This is no time for party strife. The nation is in peril, and it calls for her citizens to defend her. Our duty is clear. Let us rise like men, gird up our loins and do that which honour, duty and self-interests alike dictate.

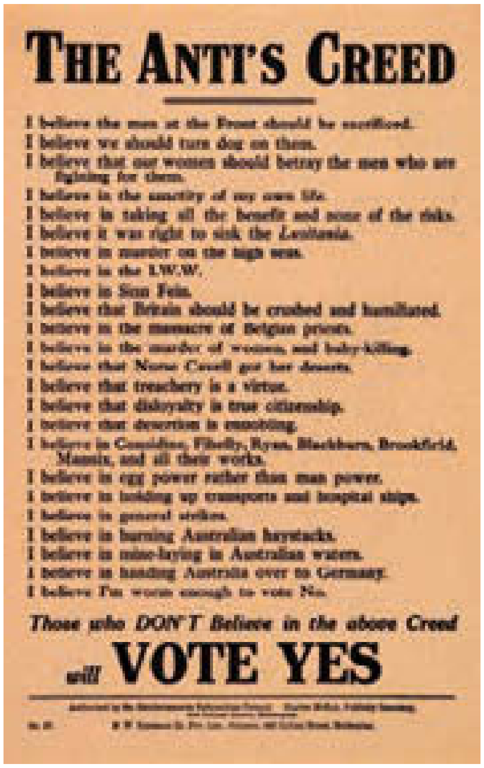
An excerpt from a speech by Prime Minister Billy Hughes, 18 September 1916

Source 2

… It is only twelve months since the people of Australia pronounced their emphatic verdict … that Australia is a democratic country, and that there is no room here for slavery and conscription. Now you are asked to pronounce on the same question again. I hope that your answer will be the same as before, but more emphatic and decisive.

We are quite ready to hear anything that the conscriptionists have to add on what they said on the previous occasion. Many things said then have since been unsaid, because they were untrue. This time, I hope that, even at the cost of some effort, they will stick as closely as they can to the truth. We were told a year ago that we should vote for conscription because there was some great secret locked up in the bosom of the Prime Minister. I hope there is no secret there now! Let us hear the worst. Indeed, we are likely to get very gloomy news from this to the taking of the referendum. We always get the news that fits the occasion. At other times, all our battles are victorious and our losses are very light. But now the Allies will suffer one defeat after another – and all for the lack of conscription in Australia and of a few more Australians in the trenches. Do not take my word for this. Just watch the papers. Wait and see what they have ready for you during the next few weeks. You will be appealed to as if everything depended on what Australia does or leaves undone …

Excerpt from a speech delivered by Archbishop Daniel Mannix to 6000 people, two months before the second conscription plebiscite in 1917



THE ANTI'S CREED

I believe the men at the Front should be sacrificed.
I believe we should turn dog on them.
I believe that our women should betray the men who are fighting for them.
I believe in the sanctity of my own life.
I believe in taking all the benefit and none of the risks.
I believe it was right to sink the *Lusitania*.
I believe in murder on the high seas.
I believe in the I.W.W.
I believe in Sinn Fein.
I believe that Britain should be crushed and humiliated.
I believe in the massacre of Belgian priests.
I believe in the murder of women and baby-killing.
I believe that Nurse Cavell got her deserts.
I believe that treachery is a virtue.
I believe that disloyalty is true citizenship.
I believe that desertion is ennobling.
I believe in Considine, Fihelly, Ryan, Blackburn, Brookfield, Mannix, and all their works.
I believe in egg power rather than man power.
I believe in holding up transports and hospital ships.
I believe in general strikes.
I believe in burning Australian haystacks.
I believe in mine-laying in Australian waters.
I believe in handing Australia over to Germany.
I believe I'm worm enough to vote No.

Those who DON'T Believe in the above Creed
will VOTE YES

Source 3
A leaflet produced by the 'Reinforcements Referendum Council', a pro-conscription group in Melbourne, Victoria, in 1917

skill**drill**

Identifying the origin, context and purpose of primary and secondary sources

Historians use primary and secondary sources to gather evidence about the past. Both primary and secondary sources are useful, but sources will almost always reflect the perspective of the person who created them, as well as the attitudes and beliefs of the time they were created in. All sources are affected by the author's own point of view, and in some cases an author may have been paid or forced to write in a particular way or ignore certain facts. This is why historians must carefully analyse and evaluate sources. Historians need to identify:

- what a source is and where it came from (origin)
- what life was like when the source was created (context)
- why the source was created (purpose).

Ask yourself the following questions to identify the origin, context and purpose of a source:

Step 1 Identify origin

- What type of source is it?
- Who wrote, produced or made the source? What do you know about their age, gender, occupation, position in society or religious background?
- When was the source written, produced or made?
- How old is the source?
- Is it an eyewitness account or was it written by someone at a later date?
- Is the source complete?

Step 2 Identify context

- What was life like when this source was created?
- What other events may have been happening at the time and might have influenced the author or source?
- What was the political environment like at the time the source was created?
- What sort of common prejudices and social norms existed at the time that may have influenced the author or the source?

Step 3 Identify purpose

- Why was the source written or created?
- Was it designed to entertain, persuade or argue a point of view?
- Does the author have anything to gain personally from the source?
- Does it give a detached, balanced account?
- Were there political reasons for the creation of the source?
- Is it propaganda?

Apply the skill

1 Identify the origin, context and purpose of the three sources in this section (Sources 1, 2 and 3) by following the steps provided.

  a For each source, work through the questions listed in steps 1, 2 and 3. Create a table in which to record your answers at each step. In order to answer some of these questions, you will need to draw on information from this chapter. You may also need to conduct some additional research about Prime Minister Billy Hughes, Archbishop Daniel Mannix and the Reinforcements Referendum Council.

  b Once you have completed your analysis of the three sources, write a 300-word report that explains the origin, context and purpose of each.

Extend your understanding

1 Many women wrote letters to newspapers arguing for and against conscription during World War I. Choose one side of the conscription debate and write a letter to the editor from the perspective of a parent whose son is a soldier on the front line.

9.17 Anzac Day and the Anzac legend

LET SILENT CONTEMPLATION BE YOUR OFFERING

Source 1 The State War Memorial in Kings Park, Perth, commemorates Western Australians who gave their lives in World War I.

Even before World War I had ended, Australians began looking for ways in which the whole nation could recognise the efforts of the Australian forces and commemorate their sacrifices. Today, we continue to remember World War I with two official commemoration days – Anzac Day and Remembrance Day – along with a number of other symbols and traditions.

For Australians, commemoration of World War I has always been closely tied to the Gallipoli landing on 25 April 1915. Despite Australians being involved in more successful campaigns and battles during World War I, it is Gallipoli that has come to symbolise Australia's war experience.

Despite the disastrous landing and loss of life, Australians at home met the news from Gallipoli with a sense of pride. In the first news reports that reached Australia, the soldiers were praised for their courage and gallantry. British war correspondent (journalist) Ellis Ashmead-Bartlett wrote of the Anzacs, 'There has been no finer feat in this war than this sudden landing in the dark and storming the heights, above all holding on whilst the reinforcements were landing'. (*The Argus*, 8 May 1915). His views were echoed by British General Sir Ian Hamilton.

Source 2

> … History contains no finer record of dauntless bravery than is here described, while the

> knowledge of the magnificent part taken in this spectacular drama by our own gallant troops will thrill every heart in our own land.
>
> Ian Hamilton, 'Australia's Glorious Day: The Official Story of the Landing and Attack by Our Combined Forces at the Dardanelles'

The greatest praise of all came from King George V, who stated that the diggers had 'indeed proved themselves worthy sons of the Empire'.

Anzac Day commemoration

Anzac Day, 25 April, was made a day of commemoration in 1916. That year, ceremonies and marches were held all around Australia. A march was also held in London, England, where the Anzac troops were hailed by local newspapers as 'The Knights of Gallipoli'. By 1927, Anzac Day had become a public holiday in Australia, with marches and dawn services held around the country annually.

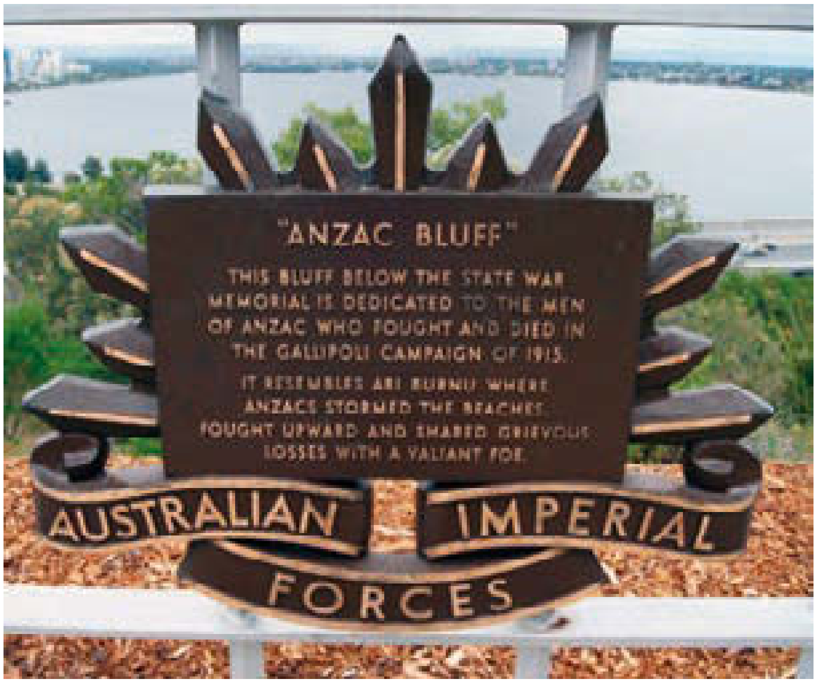
The events of 25 April 1915, on a peninsula in Turkey, continue to resonate with Australians today. More than any other event in Australia's history, the Gallipoli landing occupies a special place. A legend has developed around Gallipoli that grows stronger as the years pass. Schoolchildren learn about the Gallipoli landing and relish legends such as the story of Simpson and his donkey. Hundreds of thousands of Australians join in or watch Anzac marches through large capital cities and small country towns. Many more take part in commemorations and wreath-laying ceremonies at war memorials throughout the country.

Each year, increasing numbers of young Australians find their way to Gallipoli to be present at the Anzac Day dawn service there. It has become something of a rite of passage. Anzac ceremonies, wherever they are held, traditionally conclude with the words from Laurence Binyon's poem 'For the Fallen':

Source 4

They shall grow not old, as we that are left grow old;
Age shall not weary them, nor the years condemn.
At the going down of the sun and in the morning
We will remember them.

'For the Fallen', Laurence Binyon


"ANZAC BLUFF"
THIS BLUFF BELOW THE STATE WAR MEMORIAL IS DEDICATED TO THE MEN OF ANZAC WHO FOUGHT AND DIED IN THE GALLIPOLI CAMPAIGN OF 1915.
IT RESEMBLES ARI BURNU WHERE ANZACS STORMED THE BEACHES, FOUGHT UPWARD AND SHARED GRIEVOUS LOSSES WITH A VALIANT FOE.
AUSTRALIAN IMPERIAL FORCES

Source 3 This plaque near the State War Memorial in Kings Park commemorates the 2500 Anzacs who lost their lives at Gallipoli. The area was renamed Anzac Bluff in 1974 because it resembles the site at Anzac Cove where soldiers first landed.

Source 5 A dawn memorial service is held on 25 April each year at Anzac Cove, Gallipoli.

Origins of the legend

The significance of the Gallipoli campaign, and the origin of the Anzac legend that surrounds it, can largely be linked to the fact that it was the first time that Australia had fought in a war as a nation. Australia had only existed for 13 years as a united country at the time it went to war. Australians at home waited eagerly for accounts of the first encounter of the Australian Imperial Force. When news of the first battles at Gallipoli appeared in Australian papers on 8 May 1915, the fact that the landing had been a failure was almost completely overlooked.

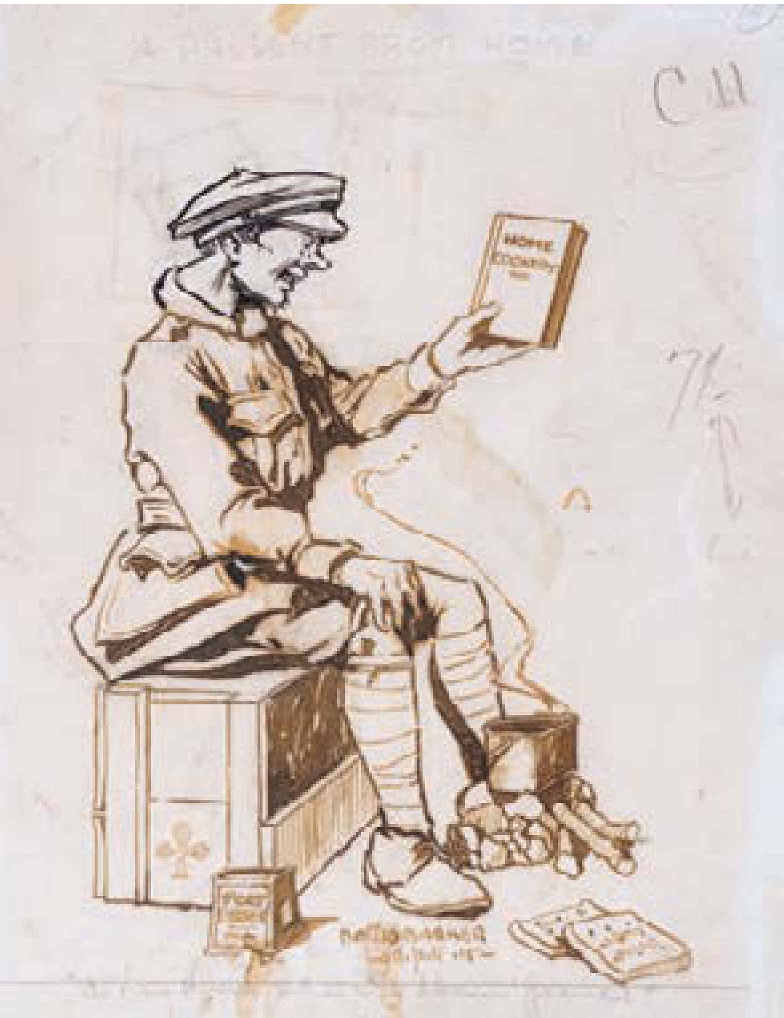
Commentators at the time, and in the years since 1915, have developed the theme that Gallipoli was a defining national experience. It has been said that 'Australia became a nation on the shores of Gallipoli'. Historians have referred to the Gallipoli experience as Australia's 'baptism of blood' or 'baptism of fire'. Australian historian Bill Gammage wrote of the experience, 'The circumstances of a national army, an arena, a brave enemy … led three nations, Australia, New Zealand and Turkey, to create national traditions from the Gallipoli Campaign'.

It has also been suggested that, although they were enemies, a sense of respect developed between the Anzac soldiers and the Turks. Engraved at Anzac Cove are the words written in 1934 by Kemal Atatürk, Commander of the Turkish 19th Division during the Gallipoli campaign, and the first President of the Turkish Republic, from 1924 to 1938:

Source 6

> Those heroes that shed their blood and lost their lives … you are now lying in the soil of a friendly country. Therefore rest in peace. There is no difference between the Johnnies and the Mehmets to us where they lie side by side here in this country of ours. You, the mothers, who sent their sons from far away countries, wipe away your tears; your sons are now lying in our bosom and are in peace. After having lost their lives on this land they have become our sons as well.
>
> Memorial written by Kemal Atatürk, 1934

Source 7 Anzac soldiers in the trenches using periscope rifles



Source 8 'A present from home – "Do they think we're on a bloomin' picnic?" ', cartoon from *The ANZAC Book*, 1916, edited by CEW Bean, p. 64

Source 9 As this photo (taken on 19 August 1966 during the Vietnam War) indicates, Australian soldiers have maintained the spirit of 'mateship' in battle first evident at Gallipoli 50 years earlier.

key**concept:** Significance

Alec Campbell

Source 10 Alec Campbell

The last living direct Australian link to the Gallipoli campaign was lost on 16 May 2002 with the death of Alexander William ('Alec') Campbell, aged 103. Campbell enlisted in the AIF at age 16, after lying about his age to meet the required minimum age of 18. Campbell landed at Gallipoli in November 1915. He carried ammunition, supplies and water to the trenches. He was discharged on medical grounds around a year later. Campbell's funeral in 2002 was attended by the then Prime Minister John Howard and the chiefs of the defence forces. On this day, around Australia and overseas, flags were flown at half-mast to pay respect to this final link to Gallipoli.

For more information on the key concept of significance, refer to page 209 of 'The history toolkit'.

Check your learning 9.17

Remember and understand

1 What was the immediate reaction in Australia to the news of the Gallipoli landing?

2 In what year was Anzac Day made a day of commemoration?

3 In what year did Anzac Day become a public holiday?

Apply and analyse

4 Why do you think the Gallipoli landing is such a significant event in Australia's history?

5 The Anzacs were fighting the Turks on their home soil. They could be said to have invaded Turkey. However, there seems to have been a mutual respect between the two peoples, which has grown through the years. What reasons can you think of to explain this? Conduct research online to help you if necessary.

Evaluate and create

6 Re-read the memorial written by Kemal Atatürk (Source 6). Imagine you are one of the mothers whose sons are buried at Gallipoli. Write a letter of gratitude to Atatürk.

9.18 Other forms of commemoration

Symbols, traditions and events that commemorate war are important elements in almost all nations. Well-tended war cemeteries can be found wherever significant battles have been fought. The Australian War Memorial in Canberra is one of the most visited sites in Australia. War memorials, avenues of honour and statues of war heroes can also be found in virtually every Australian town and city.

The legacy of World War I has shaped many aspects of Australian society and culture over the course of the 20th century, both positively and negatively. The restrictions on trade imposed by the war forced Australia to develop new industries.

The War Service Homes scheme was responsible for the development of new suburbs – streetscapes of comfortable Californian bungalows that are so desirable today. New hospitals, including the Repatriation General Hospital established in Hobart in 1921, were set up to care for those who had returned from war with physical or, sometimes, mental injuries. The Returned and Services League (RSL), established in 1916, continues to provide support and advocacy for the veterans of any war that Australia has engaged in over the past century.

Source 1 During World War I, red poppies were the first plants to bloom on the battlefields of France and Belgium. Today, the red poppy has become a symbol of sacrifice and remembrance.

Remembrance Day

Anzac Day is the main day for war commemoration in Australia and New Zealand. However, Remembrance Day, 11 November, is a more general recognition of the sacrifices made in war. This date marks the day and the hour when the Armistice (ceasefire) was signed, bringing an end to World War I.

In many countries, people pause for one minute at 11 am on Remembrance Day to remember those who gave their lives in war. Red poppies are worn to symbolise the dead. Red poppies grew wild along the Western Front and also in Turkey. At these ceremonies, the poem 'In Flanders Fields' (see Source 2) is frequently read.

Source 2

In Flanders fields the poppies blow
Between the crosses, row on row,
That mark our place; and in the sky
The larks, still bravely singing, fly
Scarce heard amid the guns below.
We are the Dead. Short days ago
We lived, felt dawn, saw sunset glow,
Loved and were loved, and now we lie
In Flanders fields.
Take up our quarrel with the foe:
To you from failing hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields.

'In Flanders Fields', John McCrae (1872–1918)

The Australian War Memorial, Canberra

The Australian War Memorial in Canberra is Australia's national memorial to all those who have died or participated in the wars of the Commonwealth of Australia. It was opened in 1941, but the idea for it was conceived on the shores of Gallipoli.

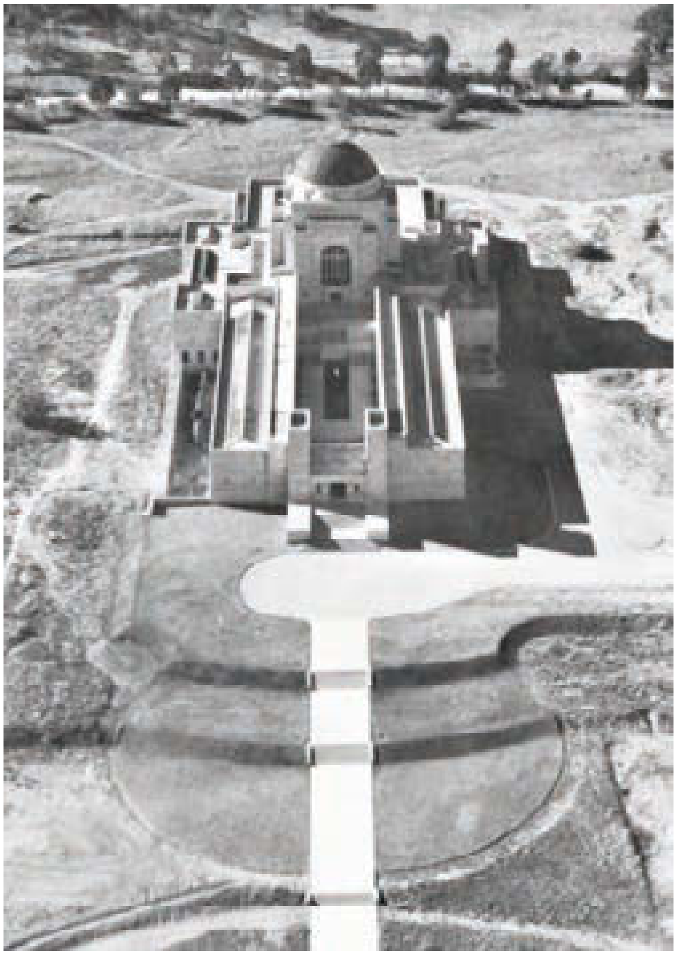
Charles Bean (1879–1968), a journalist, was Australia's official war correspondent during World War I. He went ashore on Gallipoli on 25 April 1915 and stayed close to the front line for the rest of the war. It was he who, in 1918, first imagined how the Australian War Memorial would appear.

Source 3

> … on some hill-top – still, beautiful, gleaming white and silent, a building of three parts, a centre and two wings. The centre will hold the great national relics of the A.I.F. One wing will be a gallery – holding the pictures that our artists painted and drew actually on the scene and amongst the events themselves. The other wing will be a library to contain the written official records of every unit.
>
> CEW Bean, 1918, cited in Australian War Memorial website

The Australian War Memorial features a Roll of Honour that lists all those who died in World War I, as well as a Commemorative Roll which lists all those who died as a result of war injuries after the war finished.

Source 4 Charles Bean at work on war histories in his Victoria Barracks office, Sydney, *c.* 1935



Source 5 An aerial view of the Australian War Memorial, Canberra, 1945

Check your learning 9.18

Remember and understand

1 Why are red poppies worn on Remembrance Day?

2 What is the purpose of the RSL?

Apply and analyse

3 Why do you think that wars and war experiences are such significant elements of so many national stories?

4 What is the main purpose of the Australian War Memorial? What information is featured there?

Create and evaluate

5 The poem 'In Flanders Fields' (Source 2) is often read at Remembrance Day ceremonies. Think carefully about the emotions and sentiments that it expresses. Write your own poem that also reflects these sentiments and that commemorates World War I.

9D rich task

The Anzac legend today

The Anzac legend has not remained static. It was expected that as the last of the World War I diggers died, the significance of Gallipoli would begin to fade. There was some decline in interest in Anzac Day in the decades after World War II, but since the 1980s Anzac Day has grown in significance.

The reasons for this resurgence of interest in the Anzac legend and the Gallipoli story are complex. The attention paid to the declining numbers of World War I veterans combined with the popularity of films such as *Gallipoli* have brought the events of 1915 to the attention of the wider community. The pilgrimage of Gallipoli survivors in 1990, to mark the 75th anniversary of the campaign, brought widespread media and popular awareness of the Gallipoli landing.

Today, interest in Anzac Day has never been stronger. School assemblies, church services, television and radio programs and even sporting events are linked to the commemoration of the Gallipoli landing. The nation commemorated the centenary of Gallipoli in 2015, and the place of the Anzac legend is firmly and securely at the centre of national consciousness.

Yet despite the significance of Anzac Day in Australian society, opinions on its origins and importance vary. The following sources (see Sources 1 to 3) show how Australians have debated the meaning of the Anzac legend across time.

Source 1

No one can express all that this day means to us Australians and New Zealanders. 'It is', said Australia's great historian Manning Clark, 'about something too deep for words.' But in the stillness of the early dawn, and in the silence that will settle once more along this shoreline, we feel it in the quiet of our hearts. The sense of great sadness. Of loss. Of gratitude. Of honour. Of national identity. Of our past. Of the spirit, the depth, the meaning, the very essence of our nations. And of the human values which those first Anzacs – and those who came after them – embodied and which we, their heirs, must cherish and pass to the future.

May they rest with God.

Address by His Excellency the Governor-General Sir William Deane at Gallipoli, 25 April 1999

Source 2

HR: [Anzac Day] is a day on which Australia remembers the war dead from all wars and grieves and mourns their death and their sacrifice. But there's another quite different aspect of it, and that is it's suggesting that the actual landing at Anzac was an event of overwhelming historic importance, and in fact many people would argue, and do so, that is was the creation of the Australian nation.

… We … fully accept and appreciate that every nation has some kind – some day – in which to remember the sacrifice of those who have gone to and have died in war, or have suffered in war. There's no problem with that whatsoever. It is what is built upon that. We are simply pointing out that the whole interpretation of Australian history is distorted by this view of Anzac.

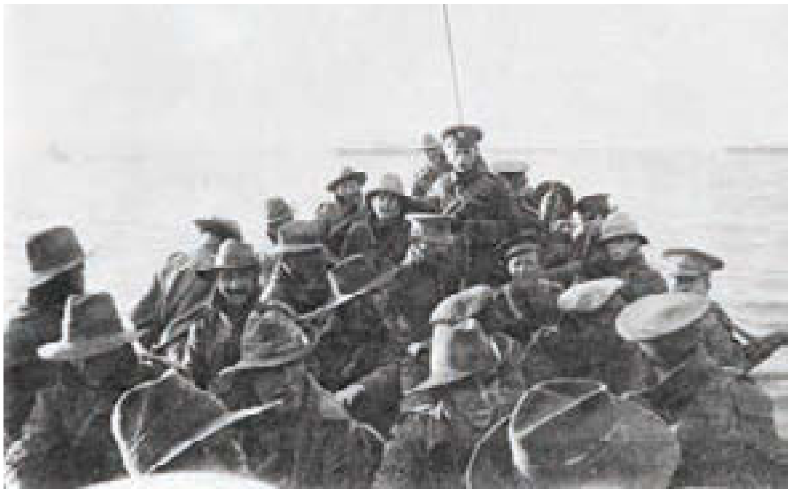
AG: Australia's achievements in nation building and social areas – a living wage and decent working conditions, the 1967 referendum relating to Aborigines – all these things … are cast aside in favour of a new militarised view of history.

HR: [Governments in the last 15 years] have put a great deal of money, particularly addressed at children, … at schools, curriculum material, films … an unprecedented amount of government money going into promoting a particular view of history.

… we can only presume it was done with a view that Australians needed a unifying myth; they needed something to feel proud about their country. But …, by 1914, Australia was … a society which would be the envy of many countries even today. And yet the argument of the militarists is that this achievement wasn't as great because, at the time, there was this view that nations didn't become complete until they'd had their baptism of fire.

… Our argument is not with the mourning-aspect of Anzac Day, it's more with the way in which a whole interpretation of history has been built upon that and, in a way, sanctified by that.

An extract from an interview with the historian Professor Henry Reynolds, ABC, News, *AM,* Brisbane, 24 April 2010. Henry Reynolds [HR] is speaking with reporter Annie Guest [AG] about the book *What's Wrong with Anzac? The Militarisation of Australian History,* UNSW Press, 2010, which he and Professor Marilyn Lake co-edited.



Source 3 Australian soldiers in a boat heading towards Anzac Cove, 25 April 1915 (AWM AQ2781)

skill**drill**

Identifying and analysing different historical interpretations

As explained earlier, historians use two types of sources to gather evidence about the past:

- primary sources – objects or materials created or written at the time being investigated
- secondary sources – accounts about the past that were created after the time being investigated.

Much of the historical study and research you will complete in secondary school involves reading secondary sources (for example, textbooks and websites about the historical period you are studying). While these secondary sources at first glance may appear to provide a balanced, objective and unbiased view of historical events or periods, this is not always the case. All historians write from a particular perspective. There is no single objective, unbiased 'truth' – instead, all historians have to interpret historical events and issues from their own perspectives. Historians must use evidence to support their interpretations, but there is no absolutely 'correct' way of interpreting evidence. They are also required to use (or disregard) different sources of evidence to support many different interpretations. For example, many historians writing in the early 1900s about the British settlement of Australia presented this in a very positive light, and more or less ignored the negative experiences of Indigenous Australians.

For these reasons, it is very important that you are able to identify and analyse different historical interpretations. Ask yourself the following questions:

- What historical event is being interpreted?
- What particular features, incidents, actions or behaviours are seen as negative in this interpretation?
- What motives or characteristics are being attributed to the humans involved in this interpretation?
- What primary sources are used to support the interpretation? How?
- What primary sources might have been left out of or ignored by this interpretation?
- Does this interpretation involve a critique of other interpretations? If so, what is being said about other interpretations?

Apply the skill

1 Consider Sources 1 and 2. Using the questions above as a guide, identify and analyse the way that the writer of each source has interpreted the events that occurred on 25 April 1915 on the shores of Gallipoli. Write a 250-word report explaining your findings using additional background information from the Internet if required.

Extend your understanding

1 Interview 10 people (males and females of various ages and occupations). Use these interviews, plus other material in this chapter, to write an article for your school newsletter titled: 'What Anzac Day means to Australians today'.

2 The Peter Weir film *Gallipoli* (1980) is thought to have played an important role in the revival of interest in the Anzac legend. View the film and suggest why it may have had this impact. Refer to specific features of the film (scenes, characters, incidents, symbols and music).

part 3

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economics and business

Concepts and skills

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Concepts and skills

The economics and business toolkit

Economics – why is everyone so concerned about it? It is important because economics is about people producing **goods and services** to be consumed, used and shared. It is about maximising the goods and services that can be produced with a limited amount of resources.

Over 23 million people live in Australia, which amounts to a lot of production and consumption of goods and services. To coordinate and organise these processes we have an **economic system** that is modelled on how a market works.

The government and the Reserve Bank also have roles to play in managing the Australian **economy**.

At the heart of every economy is **business**. Business is about producing goods or providing services in exchange for money. In the 21st century, young people will need to adapt to change and seek new and innovative ways to do business in a global marketplace.

10A

What are economics and business concepts?

10B

What are economics and business skills?

chapter 10

Source 1 The Internet allows buyers and sellers to easily exchange goods and services on a global basis. It's an exciting time to be in business.

10C

What career opportunities are there in economics and business?

10.1 Economics and business concepts

Economics and business students can use a wide range of concepts to help them understand the world of economics and business. These concepts may be used together or as separate ideas. As you learn to use each of these key concepts you will begin to think like an economist or business person.

The six key concepts of economics and business are:

- **scarcity**
- **making choices**
- **specialisation** and **trade**
- **interdependence**
- **allocation** and **markets**
- **economic performance** and **living standards.**

Scarcity

Scarcity is the economic problem of having unlimited needs and wants, but limited resources available. Resources can include natural or made materials; for example, water, electricity, soil and sugar are all examples of resources that may be used in the production of goods or services (the items or activities we buy) that are used to fulfil our needs and wants. People can also be considered resources; for example, skilled workers are also an important part of developing products that will meet our wants and needs.

In economics and business, resources can be divided into four categories, known as the **factors of production** (or economic resources). These categories are:

- land (natural resources such as coal or water)
- labour (human resources such as workers)
- capital (manufactured resources such as equipment)
- entrepreneurship (management resources: the skills or talents required to bring the other resources together successfully).

Let's take a closer look at natural resources in particular. In Australia water is a natural resource that can be scarce and therefore must be managed carefully. The scarcity of this resource impacts many businesses that supply us with goods and services, including many Western Australian farmers who must manage water so that they may continue to produce crops for us to consume as the goods we need or want. Our reliance on limited resources such as water means we cannot produce an endless supply of goods such as wheat, because the resources we need to produce them are not endless.

Our limited access to resources means we are not all able to have everything we need (or think we need). Businesses or individuals are not always able to obtain all the resources they need, which means they must manage what they do have carefully. An important part of economics is examining the decisions that result from our need to manage scarce resources.

Source 1 Wheat farmers standing with their crop in Amuri, near Geraldton

Making choices

Making choices is an important part of economics. As consumers, we make choices about what we want to buy to satisfy our needs and wants. These decisions can be small, such as what we will buy for lunch, or big, such as whether or not to buy a house.

In order to make a good economic decision, we consider our options. We evaluate these alternatives, weighing up the costs and benefits of each, in order to choose the option that is best for us.

Throughout our lives we will be faced with many economic decisions. In addition to consumer decisions, we might need to make:

- financial choices (such as how much money to save or spend)
- business decisions (such as what to produce or where to sell a product)
- employment decisions (such as what career path to follow)
- legal decisions (such as whether or not to take legal action over a faulty product)

Part of our need to make choices results from the concept of scarcity. Because our resources are limited, we are not able to produce, buy or own everything we want or need. We therefore must decide or prioritise what we wish to produce or consume using the resources available to us.

Specialisation and trade

Many countries around the world are unable to produce the variety of goods and services required to support the wants and needs of their population. This can be for a number of reasons, including the availability of resources. When a country is unable to produce a good or service, it can **import** goods or services from other countries. For example, many Asian countries rely on Australia's farming industry to provide their population with goods such as beef, as they do not have the resources to produce their own beef on a large enough scale.

Specialisation refers to the way an individual, business, or entire country can focus on the production of a particular good or service in order to develop a more efficient and competitive production process. Australia is rich in natural resources and this influences the types of goods and services we produce for domestic consumption and export. For instance, Australia is one of the world's largest and most efficient producers of livestock and exporters of red meat. This is because we have the resources, such as land area, to support a large agricultural industry.

Source 2 Japan is one of the biggest importers of Australian beef.

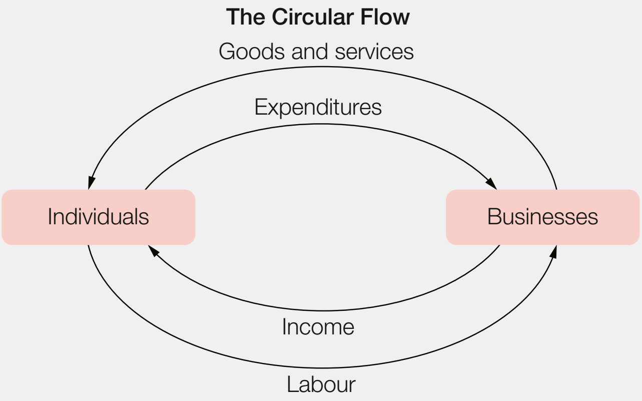
The beef industry is worth around $18 billion to the Australian economy. Since Australians only consume around $7 billion of beef each year, this leaves the remainder, known as the **surplus**, to be exported to other countries around the world.

Like many other countries, Australia also needs to import products which we are unable to produce competitively ourselves. For example, while Australia is technically capable of manufacturing cars, we import most of our vehicles from countries that specialise in the automotive industry because it is much cheaper. Specialisation in an industry allows a country to become more efficient over time as production increases and the country is able to take advantage of **economies of scale**. This means that the mass production of goods is cheaper than producing goods or services in smaller quantities. Producing goods or services in larger quantities reduces costs, because the cost of producing a product is spread across many products. To use a simple example, the cost of electricity is the same whether you bake one cake or four cakes in an oven. If you bake four cakes your costs are spread across a larger number of products. When a country is able to specialise and produce goods or services in larger quanitiies they may have a price advantage over less specialised countries, who would be unable to produce a product for the same price without economies of scale.

Interdependence

Interdependence refers to the way we rely on others to satisfy our wants and needs. Participants in our economy, including producers and consumers, businesses or government, depend on each other to produce, specialise and consume goods and services. If you are not able to produce everything you need for yourself – for example the electricity you use, the clothes you wear or the food you eat – you are considered dependent. We rely on others to help fill the gaps in our needs and wants that we cannot produce ourselves.

As consumers, we must pay for goods and services to meet our needs. In order to afford these things, we rely on earning an income, such as by working for businesses. Businesses or producers rely on being able to sell their goods and services to consumers so that they can continue producing. Source 3 shows how a consumer's ability to earn an income, and therefore purchase goods and services, is dependent on producers. Similarly, producers rely on consumers to provide work for them and also purchase their goods and services. This interdependence is often referred to as a simple **circular flow of income**.



Source 3 The simple circular flow of income shows how consumers and producers rely on each other, or are interdependent

Allocation and markets

The concept of **allocation** refers to the way we distribute our scarce resources among producers. It also refers to the way we then distribute scarce goods or services among consumers. As we learn as we study economics, the scarcity of resources available means that we cannot fill all of our wants and needs.

There are many ways to distribute resources. The exchange of goods and services (or resources) among buyers and sellers is referred to as a **market**. It is our market economy that most often determines how resources will be distributed. This means we often rely on price in order to determine how much we are able to produce and consume.

When the cost of producing or obtaining a particular resource is high, not everyone will be able to obtain it. For example, the cost of medical treatment for certain conditions or illnesses such as cancer, diabetes and multiple sclerosis (MS) can be very expensive. Some treatments of MS can cost thousands of dollars each month, and treatment must continue for the rest of the patient's life. While the government in some countries can assist people to access important resources such as these, patients in poorer nations may be unable to access the treatment they require because it is too expensive.

Economic performance and living standards

Economists measure how well an economy is doing, known as its **economic performance**, using a wide variety of methods. It is important to measure our economy so that we can understand what problems exist, to develop solutions for our problems and plan for our future. Often economies will set objectives, such as reducing national debt, and then measure their performance against these objectives. Some key indicators of economic performance include:

- **Gross Domestic Product (GDP)** – the total value of goods and services produced in a country over a year
- **inflation** – the general increase in prices of goods and services
- the **unemployment rate** – the percentage of people who are unemployed out of all people who are able to work

We can measure an economy at a number of different levels, such as Western Australia's economy, Australia's economy, or the global economy.

Economists also measure **living standards**. Living standards can be material or non-material. **Material living standards** refer to our access to physical goods and services. People in Australia are considered to have very high material living standards, because most of our population has easy access to food or services that allow us to fulfil our wants and needs. Non-material living standards are harder to measure and include things that may contribute to our happiness, such as freedom, low crime levels, access to facilities or free elections.

Measuring economic performance and living standards is an important part of understanding and managing our economy. By knowing our areas of strength and weakness, governments can develop policies to improve our economy and as a result our standard of living.

Source 4 Our scarce resources, goods and services are often allocated to consumers and producers based on their price. Items that can be expensive to produce and therefore expensive to purchase, such as medication, can be more difficult to obtain than items that can be cheaply made and sold.

Check your learning 10.1

Remember and understand

1 What is scarcity?
2 How is making choices related to scarcity?
3 Why do some countries specialise in producing a particular product?
4 How does the market influence the allocation of resources?
5 What is the difference between material and non-material living standards?

Apply and analyse

6 Many concepts of economics and business are interrelated. Describe the relationship between the following concepts:
  a scarcity and making choices
  b interdependence and specialisation and trade
  c making choices and allocation and markets
  d scarcity and allocation and markets
  e economic performance and living standards and scarcity.

Evaluate and create

7 Research one of Australia's major industries (for example, farming, mining, transportation or tourism) and answer the following questions:
  a How much does this industry contribute to the Australian economy?
  b What would be the benefits of Australia specialising in this industry?
  c What are the challenges faced by this industry? Does it relate to any of the key concepts we have discussed (i.e. scarcity, allocation of resources, interdependence)?

10.2 Economics and business skills

Economics and business students use real-life economics and business examples to help them generate questions, interpret information and argue their point of view. They also learn through experience where they make use of role play, simulation games and enterprising activities that provide an opportunity to be innovative, show leadership and the ability to make wise business decisions.

Studying economics and business requires you to analyse information and ask a range of questions to find out more about a topic. You will learn to question and research information by asking what, why, when, who and how to uncover the truth about an issue. Your investigation may involve weighing up the costs and benefits of an economics or business proposal and making recommendations.

Source 1 'Learning on the job' provides great insights and opportunities for economics and business students.

Questioning and research	• Identify current personal knowledge, gaps, misconceptions, currency of information, personal perspective and possible perspectives of others • Construct, select and evaluate a range of questions and hypotheses involving cause and effect, patterns and trends, and different perspectives • Analyse and clarify the purpose of an inquiry using appropriate methodologies, ethical protocols and concepts to plan for, and inform, an investigation • Use a range of methods to collect, select, record and organise relevant and reliable information and/or data from multiple sources that reflects the type of analysis of information that is needed (e.g. questionnaires, surveys, emails, tables, field sketches, annotated diagrams), with and without the use of digital and spatial technologies • Identify the origin, purpose and context of primary sources and/or secondary sources • Use appropriate ethical protocols, including specific formats for acknowledging other people's information, and understand that these formats vary between organisations
Analysing	• Use criteria to analyse the reliability, bias, usefulness and currency of primary sources and/or secondary sources • Analyse information and/or data in different formats (e.g. to explain cause-and-effect relationships, comparisons, categories and subcategories, change over time) • Account for different interpretations and points of view/perspectives in information and/or data (e.g. from tables, statistics, graphs, models, cartoons, maps, timelines, newspapers) • Analyse the 'big picture' (e.g. put information and/or data into different contexts, reconstruct information by identifying new relationships, identify missing viewpoints or gaps in knowledge) • Apply subject-specific skills and concepts in familiar, new and hypothetical situations
Evaluating	• Draw evidence-based conclusions by evaluating information and/or data, taking into account ambiguities and multiple perspectives; to negotiate and resolve contentious issues; to propose individual and collective action in response to contemporary events, challenges, developments, issues, problems and/or phenomena • Critically evaluate information and/or data and ideas from a range of sources to make generalisations and inferences; propose explanations for patterns, trends, relationships and anomalies; predict outcomes
Communicating and reflecting	• Select a range of appropriate formats based on their effectiveness to suit audience and purpose, using relevant digital technologies as appropriate • Develop texts, particularly explanations and discussions, using evidence from a range of sources to support conclusions and/or arguments • Deconstruct and reconstruct the collected information and/or data into a form that identifies the relationship between the information and the hypothesis, using subject-specific conventions, terminology and concepts • Compare evidence to substantiate judgements (e.g. use information and/or data from different places or times; use tables, graphs, models, theories) • Generate a range of viable options in response to an issue or event to recommend and justify a course of action, and predict the potential consequences of the proposed action • Reflect on why all findings are tentative (e.g. changing nature of knowledge, changes in circumstances or values)

Source 2 The four categories of skills used in economics and business inquiries

10.3 Questioning and research

Develop questions and hypotheses about an economic or business issue, then plan and conduct an investigation

Economics and business students ask lots of questions. They seek out economic and business cases and undertake an investigation to try to learn from and avoid mistakes made in the past. They also check facts and look at the arguments for and against a certain issue before reaching their own conclusions. When **economists** state their own viewpoint they support this with evidence such as statistics, cases from the past, quotes from what others have said and sound reasoning.

Source 1 It is important as an economics and business student that you continue to ask questions in the classroom whenever you need more information.

skill**drill**

Developing a hypothesis

Developing a hypothesis is a useful tool in economics and business. A hypothesis is a proposition that provides an explanation or reason why something has occurred or a problem exists. It can be likened to taking an 'educated guess' or prediction. In business, developing a hypothesis and testing whether it is true or not could mean that personal and financial loss is avoided. Here is an example of a hypothesis that could be tested.

'Youth unemployment is unacceptably high because of insufficient training and education programs.'

It may help you to write a hypothesis on an economic or business issue or event by remembering the 'If and then' model of hypothesis writing. For instance, 'IF the **employer** pays extra bonuses for good performance THEN his **employees** will work harder'.

Step 1 Identify a question or make a statement that will become your hypothesis.

The following sentence may help you to create your hypothesis: 'IF____________________ THEN__________________.' (You can then reword the hypothesis to make it read better if you need to.)

Step 2 Make an educated guess about whether your hypothesis is correct. Test your hypothesis by using data and surveys, analysing any information about the topic and learning what experts in the field say about it.

Apply the skill

1. Janet plans to sell her unique brand of handmade knitted jumpers via her own website, which she intends to build herself. These jumpers are made from pure wool and are more expensive than other jumpers on the market. It takes Janet at least three days to make one jumper. Write a hypothesis about the likely success of Janet's business.
2. How could you test whether your hypothesis about Janet's business is likely to be correct?

Gather relevant and reliable data and information

Although books and newspapers are valuable sources of information, most research today is conducted online. In order to ensure that sources gathered online are accurate, reliable and relevant, a number of guidelines should be followed:

- Search engines such as Google are useful research tools, but much of the material on these sites is not reliable and may contain inaccuracies, false and misleading information or material that is out of date. When using search engines, be sure to define your search using keywords. Your librarian is a good person to ask for help and information. Most schools will also have a website devoted to providing information about developing good research skills.
- A reliable way of searching for sources is to use sites linked to educational institutions, government departments, reputable companies and universities. A quick way of telling if a site is reputable is to look at the domain name in the URL (Internet address).
- Avoid blogs posted by unknown individuals. If you find information relevant to your investigation on a blog or social media site, always verify it by using a more reliable source.
- Never cut and paste information from the internet straight into your own work. Taking someone else's work, ideas or words and using them as if they were your own is called plagiarism and can result in very serious consequences.

In your research, you may collect information from primary sources (sources from the time or event being investigated) such as photographs, letters, films, diary entries or official documents such as laws. Or you may gather information from secondary sources (sources about the time or event being investigated) such as newspaper articles, census data or websites. When using these sources, it is important to be able to distinguish between them and to know where, when and who the source came from.

The ethics of research

When gathering information, it is important to follow ethical protocols to use this information appropriately. This might include:

- informed consent – getting permission from someone to use information about them
- citation – giving credit to the right person if you are going to quote them or use information they have collected
- integrity of data – making sure your data is accurate and not made up
- confidentiality – protecting people's personal information if they do not wish you to use it.

Source 2 Taking someone else's work in any form whether it is from a book or the Internet is a form of stealing called plagiarism that can result in serious consequences.

Check your learning 10.3

Remember and understand

1 Why is it important for economics and business students to ask a lot of questions?

2 How can economics and business students ensure the sources they find online are reliable?

Apply and analyse

3 Develop a hypothesis to explain the following situations.

  a In order to pay his business' bills, John has decided to pay his employees less. Not long after, many of his employees quit.

  b Krupa owns an ice cream shop. During the summer months, business is good and she sells lots of ice cream, but during winter, not many people want to buy her ice cream.

Evaluate and create

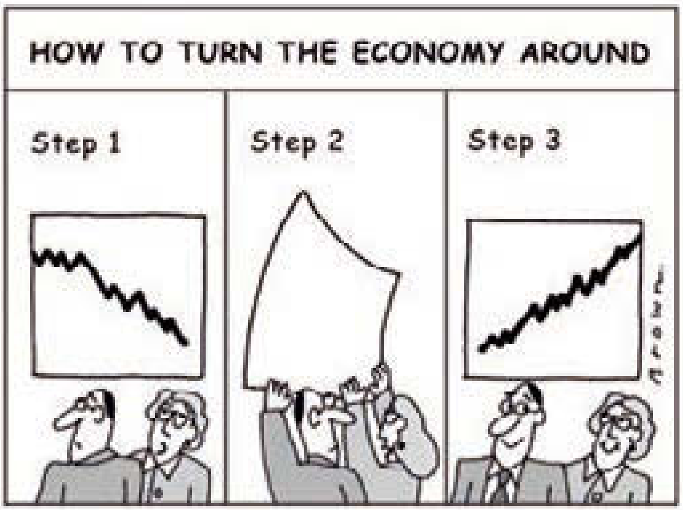
4 Develop five questions that might help an economist investigate whether or not it is a good idea for Sandy to open a fish and chip shop in the main street of her town.

10.4 Analysing

Analyse data

Economics and business students use charts, statistical tables, case studies, interviews and simulation games to help identify the cause of a problem or event and its likely outcome or effects. For example, the decline in demand for mining commodities such as coal, iron ore, zinc, nickel, copper and bauxite (the cause) has led to unemployment (the effect) in some parts of rural Australia. This is an example of a **cause-and-effect relationship**.

In economics and business, the answer to a question may be not always black or white but many shades of grey. This is because it is a subject area where there are many alternative perspectives. For example, there are many reasons why youth unemployment is higher than the general rate of unemployment in Australia and statistics may not provide all the answers. Many issues require you to weigh up alternative perspectives, all of which may be valid.


HOW TO TURN THE ECONOMY AROUND
Step 1
Step 2
Step 3

Source 1 In economics, there may be multiple perspectives on a certain issue or event. Sometimes, statistics can be illustrated to give the wrong impression.

Source 2 Interviewing different people in your community, such as your friends, neighbours or local business people, about a problem can offer a variety of interpretations.

Check your learning 10.4

Remember and understand

1 Why is there often more than one answer to an economic question?

2 What sources of information can economists use to identify the cause of a problem?

Apply and analyse

3 Identify the cause and the effect for each of the following scenarios.

- a A lot of people were angry when a concert featuring singer Sam Smith was cancelled.
- b As the Zika virus spread around the world and more people became affected, the federal government decided to put more funding into researching a cure for the virus.
- c Fewer people bought CDs after the first MP3 player was released.

10.5 Evaluating

Evaluating information, perspectives and contentious issues

There's usually more than one way to solve an economic problem or find the right solution in business. Before examining possible options, you must first do some preliminary work to find out about the topic. Read widely, consult your textbook, conduct an internet search and find out what experts say about the issue or question you are examining. Write a summary and then refine these notes by writing a list of all the options. Next to each option write the advantages and disadvantages or costs and benefits and then delete those that are weak. Concentrate on the stronger options and either make a decision about which one is best or do further research before deciding the best option.

Reading about economics or business in your textbook or using online resources can only teach you so much. Applying knowledge to a real business situation is a valuable experience and there are a number of ways you can do this:

- Talk to someone in business about their experiences to see how the things you have learned in class apply in real life.
- Observe the world around you. When you next go shopping think about some of the things you've been studying such as customer service, competition, **marketing** techniques and types of businesses.
- Try coming up with your own innovative business idea and discuss it with others.
- Use opportunities to role play or play simulation games as a chance to hone your skills and put what you have learned into practice.

Proposing a plan of action

Part of evaluating evidence is to decide on a course of action. Imagine your research question asked if the price of food at your canteen or tuck shop is reasonable. You surveyed people, compared the prices with supermarkets and other schools in your area, and have come to the conclusion that it is overpriced. What do you do now?

You could decide to do nothing if the problem isn't that bad, or you can propose action. This action might include writing to your principal or school council. Or you might encourage others to bring their lunch to school rather than buying it.

It is possible to take action as an individual or as a group. Sometimes trying to get things done by yourself can be a lot of work, and help from a team is useful. In order to make a change, the strength of a collective group can make more of a difference than one person alone.

Check your learning 10.5

Remember and understand

1 Why do you think it is important to find out about an issue before making a decision on how you will deal with it?

2 Name three ways you could apply your knowledge of economics and business to real-life situations.

Apply and analyse

3 Imagine you must choose how to spend the weekend. Conduct an analysis of the options below, based on your personal preferences, and decide which option is the best. Your analysis should take into account advantages and disadvantages for each option:

   a bike riding
   b watching a movie
   c doing homework
   d reading a book
   e playing footy with your friends
   f visiting your grandparents
   g cleaning your room.

10.6 Communicating and reflecting

Terminology for economics and business

Just like in science, a common language is used in economics and business. Source 1 defines some commonly used terms; additional economics and business terms can also be found in the glossary at the end of this book.

Communicating your findings

You can present your findings in many ways, such as through audiovisual presentations, posters or reports. Whichever format you decide to use, it is good to include the following:

- An introduction – explain your question and define key terms.
- An explanation of what research you did – why did you use those sources?
- An explanation of your results – you might like to present your results as graphs or tables.
- A conclusion – explain how you came to your conclusion.
- A proposal for action – what needs to be done now? Predict the consequences of your proposal for action.

Reflect on economic and business decisions

The decision to change a product, undertake a marketing campaign or change the price of a **product** or service can lead to business success or failure. According to the Australian Bureau of Statistics, more than 60 per cent of **small businesses** close within three years of starting out. Good business planning, research and reflecting on previous experiences can provide a valuable guide for future business success.

business	Activity that involves producing goods or providing services in exchange for money
cost–benefit analysis	Estimating what will need to be paid (costs) and possible profits (benefits) derived from a business proposal
economics	The study of how people produce, consume and share wealth
Gross Domestic Product (GDP)	The total market value of all goods and services produced within Australia in a given time frame
interest rates	The amount a borrower must pay to a lender for the use of assets such as money; usually expressed as a percentage of the total amount borrowed
investing	Putting money into shares, property or other financial schemes in the hope of making a profit
opportunity cost	The cost of the next-best alternative use of resources
unemployment rate	The percentage of people who are in the labour force who are unemployed; the labour force includes those who are employed and unemployed

Source 1 Some useful economic and business terms

Check your learning 10.6

Remember and understand

1 Use your own words to define business.

2 Why is it important to reflect on business decisions?

Apply and analyse

3 Reflect on the following scenario and determine which decisions were good or bad economic decisions.

Elan and Judy open a small bakery together. They decide to rent a shop opposite a local primary school and develop a partnership with the school filling lunch orders. They have a big sign out the front of their bakery, but decide not to do any other advertising such as dropping flyers in letterboxes or sponsoring the local netball team. Elan and Judy find most of their business comes from the primary school, but they don't get many other customers.

10.7 Careers in economics and business

There are lots of different career paths that can lead from studying economics and business. While all jobs relate to business or economics in some way, people can specialise in particular aspects of the field. The abundance of jobs available in the field of economics and business is likely to extend well into the future. As economies continue to change and businesses develop all over the world, people will play an important role in managing change, improving on business ideas and monitoring our economy's progress. Some of the many career options that lead from economics and business are listed in Source 1.

Career	Description
Business owner	A person who owns a business and earns an income by making profit from the success of the business. You can become a business owner by buying or starting your own business.
Business manager	A person who supervises the activities and employees of a business from day to day. A manager can have a diverse range of responsibilities depending on the business they work with.
Accountant	A person who inspects and helps individuals or businesses to organise their finances.
Auditor	A person who audits (inspects and analyses) an individual's or business' accounts.
Bank manager	A person in charge of the business of a local bank branch (or number of bank branches).
Economist	A person who studies the activities and trends of the economy. They can be employed by businesses or governments to understand and make recommendations on economic issues. There are many fields of economics, including market analysis, financial analysis, statistics, and many more.
Business analyst	A person employed by a business to analyse different aspects of their business (such as their operations, use of resources, structure or processes) and assess them. They can identify a business' needs and recommend solutions to help the business to improve or become more successful.
Stockbroker	A person who buys and sells shares on the stock market on behalf of an individual or business.
Treasurer	A person who manages the finances or spending of a group or organisation.
Human resources manager	A person who organises the hiring, firing, and employee wellbeing on behalf of a business. Human resources is a good career for people who enjoy working with other people.
Sales consultant/ manager	A person who works with consumers and businesses to sell goods and services. Sales consultants can work with individual customers or large companies on behalf of the business they work for.
Market researcher	A person who gathers information about consumer wants, needs and preferences to help businesses make decisions about what to produce and for whom to produce.

Source 1 Careers in economics and business

Career profile: Jessica Harris – market researcher

Jessica Harris works for a market research company that undertakes product research on behalf of both small and large businesses. In order to obtain information for her clients, Jessica uses a number of methods, including working with consumers in focus groups, organising surveys and using programs like Google Analytics. These methods all help her to gather information that she can use to assist businesses in understanding what they are doing well and what needs to be improved.

Recently, Jessica has been running a number of focus groups to help a client gain some feedback from the market about what consumers do and do not like about their new brand of biscuit, before it is officially stocked in supermarkets. Jessica loves this part of the job in particular because it lets her 'talk to lots of different people, which can be really interesting'.

Jessica enjoyed studying economics and business at high school, so she completed a degree in Commerce at Curtin University where she majored in marketing. Since graduating, Jessica has found that as a specialist in market research, there are opportunities to work not just in Perth, but all over Australia and in other countries too.

Her career in the business world has put her people skills to work, communicating with different businesses and people every day. Jessica strongly recommends that students going into Years 11 and 12 consider studying economics and business as it opens up so many opportunities and provides us with important skills and knowledge that many of us will need as we enter the world of work.

Source 2 Jessica Harris works for a market research firm, helping businesses to understand what consumers want.

Understanding the economy

At its most basic level, **economics** is the study of how people produce goods and provide services for other people to consume or use. More specifically, economics is about maximising the amount of **goods and services** that can be produced from a limited supply of resources. Every country has its own way of organising the production and consumption of goods and services. This is known as an **economic system**. In Australia, we use a **market capitalist** system. Under this system, producers exchange goods and services with **consumers** in return for money.

Countries all over the world also exchange goods and services with each other. This is called **trade**. Today, international trade is more common than ever before.

11A

How does the economy work?

1 Make a 'wish list' of all the items you would love to buy. Explain why most of us can't just buy everything we want. Why can't the economy produce everything that people wish to consume?

2 Have you ever purchased an item on sale? Why do you think the price of the item was reduced? Why is buying the sale item good for both the buyer and seller?

11B

How does Australia participate in the global economy?

1 Do you buy Nike runners or have an Apple iPad? These are imported goods. What other imported goods do you like to buy? Why?

2 Have you ever bought any of the items in Source 1? Many foods are produced by foreign-owned companies operating in Australia or are imported from overseas. Why might a country such as Australia import food?

chapter 11

The Original
SMITH'S
and the Best
LUNCHBOX FRIENDLY
BAKED NOT FRIED
ARNOTT'S
Bushell's
ARNOTT'S
TimTam
ORIGINAL

Source 1 Today, many food products that were once made and sold in Australia by Australian companies are produced by multinational corporations. More than ever before, Australia is part of a global economy.

11C

How do businesses create a competitive advantage?

1 Do you know a business that has closed down? Why did it close?

2 Why do you think fast food chains regularly change the products on their menu?

11.1 The Australian economy — an introduction

Most of us know more about economics than we think. Test your own economic knowledge by answering yes or no to these simple questions.

Test your economic instincts	Yes	No
1 You are given a wardrobe of new clothes. Would you still like to purchase other goods such as shoes or a new backpack?		
2 You already have a television, but have the opportunity to purchase a better one at a very reasonable price. Are you likely to purchase the new television?		
3 If you were selling homemade pies and knew they were popular, would you keep the price low?		
4 Mango farmers have experienced bumper crops. Is the price of mangoes likely to rise?		
5 Are bananas more expensive than diamonds?		

Source 1 Quiz: See what you know about economics

If you answered yes to the first two quiz questions and no to the rest, you already have some understanding of economics. Our needs and wants are virtually unlimited and many of us would like to purchase more goods and services. Read the case study 'What do you spend your money on?' Goods are physical items you can feel and touch, such as clothes, a skateboard, an iPad or even food. Services are non-physical things that assist us in some way or that we experience, such as attending a concert, having a haircut or getting help from a tutor.

At a very early age we learn that we 'can't have everything we want'. It's the same in the wider **economy**. We have to make choices about what can be produced and therefore consumed, because resources (used to make goods and services) are limited. Choices must be made about how best to use limited resources.

Resources in the economy

Natural resources, labour resources and capital resources are the ingredients used to make all goods and services (see Source 3). These resources are limited.

case**study**

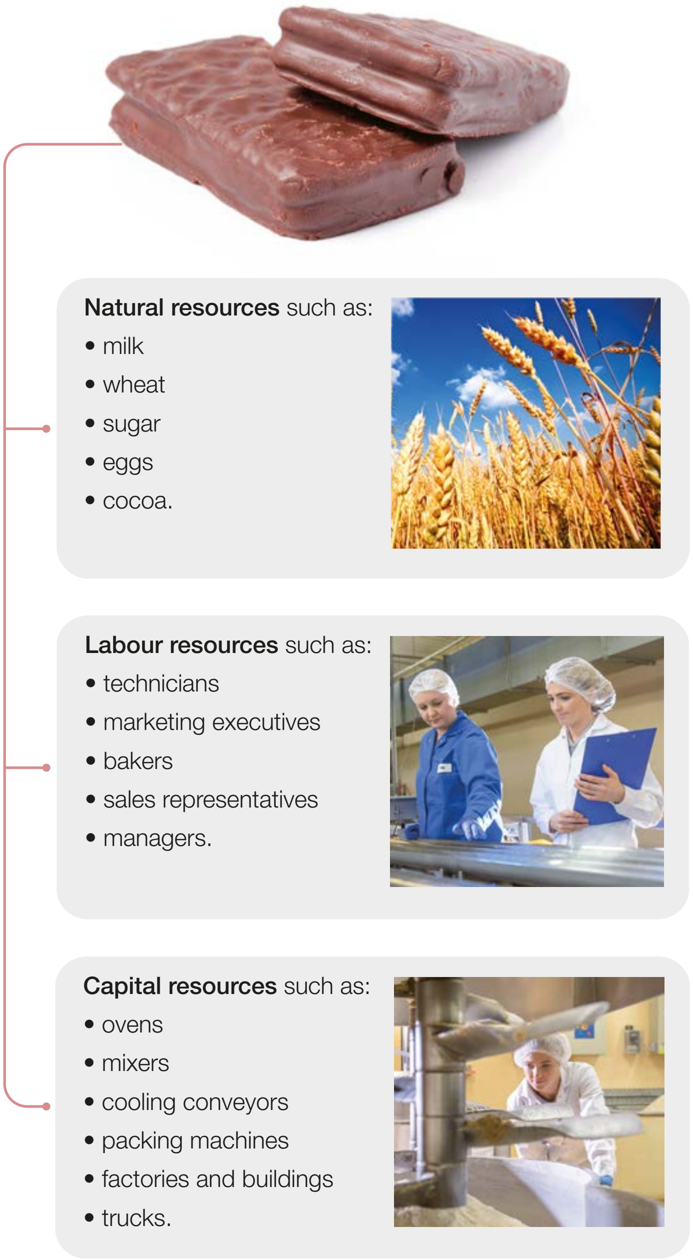
What do you spend your money on?

How much money do you **spend** per week and what do you spend it on? According to market research company TRU, average spending per week ranged from $56 for those aged 12 and 13 to $192 for 18 and 19 year olds. Based on an online questionnaire, and using the answers of a sample of 810 young people, the study found that the most popular items to spend money on were clothes, transport, mobile phones, electronics and fast food. Favourite brands were Apple, Coca-Cola, Nike, McDonald's and Adidas.

Teenagers receive money from parents, part-time jobs, gifts and allowances. According to the Australian Bureau of Statistics (the ABS) a third of full-time secondary school students had a part-time job.

Many teenagers now have the technology that allows **businesses** to market and advertise their **products**. Advertising through social networking sites and emails keep teenagers abreast of the latest consumer goods on the market. Video games have also become a popular marketing tool to reach teenagers.

Source 2 Many businesses are now using social networking sites to market their products.



Natural resources such as:
- milk
- wheat
- sugar
- eggs
- cocoa.

Labour resources such as:
- technicians
- marketing executives
- bakers
- sales representatives
- managers.

Capital resources such as:
- ovens
- mixers
- cooling conveyors
- packing machines
- factories and buildings
- trucks.

Source 3 Resources used in the production of a chocolate biscuit

Natural resources are resources that come from nature, from above or below the ground. These can include coal extracted from the ground, fish from the ocean, or wood from trees.

Labour resources are the intellectual or physical skills of a worker that are needed to make a good or provide a service. The different jobs people do every day – whether it be a store manager, bricklayer or nurse – are all classed as labour. **Capital resources** are man-made resources such as machinery, buildings, roads and bridges that are used to produce and transport the goods and services we purchase.

How to deal with the problem of scarcity – opportunity cost

There aren't enough resources available to satisfy all our needs and wants. This is because resources devoted to one type of production cannot be used to produce something else. **Economists** call this **scarcity**. Resources are limited, so we must make the best use of them. Economics is about how to make the best choices with our limited resources. At an individual level, for example, purchasing a car worth $20 000 means that person cannot afford their next best preference – going on an overseas holiday. Forgoing the overseas holiday is the real cost of buying the car. Economists refer to this as **opportunity cost** – the cost of the next-best alternative use of resources.

Check your learning 11.1

Remember and understand

1 Why are needs and wants unlimited and resources limited?

2 Complete the following table by giving examples of the different resources used to produce each of the goods or services listed.

Good or service	Natural resources	Labour resources	Capital resources
Car wash			
Bunch of flowers			
Guitar lesson			

Apply and analyse

3 Assume a farmer can grow either wheat or rice or both. The sale price of both crops is the same.

Production possibility	A	B	C	D
Wheat (tonnes)	0	100	200	400
Rice (tonnes)	200	150	100	0

a What production possibility (A, B, C or D) would give the farmer the best outcome?

b What is the opportunity cost (the next-best option) of the farmer producing 400 tonnes of wheat?

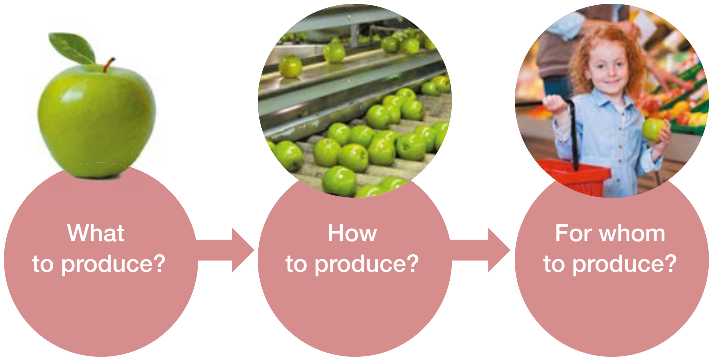
Evaluate and create

4 Do you think you spend more than your parents or carers did when they were teenagers? Why?

11.2 Economic systems and their characteristics

All countries use an economic system to ensure they use their scarce resources wisely. An economic system is a way of organising the production and distribution of goods and services. There are many different types of economic systems, but all of them must answer the three economic questions shown in Source 1.

Imagine you are stranded with your classmates on a remote island, completely cut off from the rest of the world (see Source 2). In order to survive, you would have to develop a mini-economic system. 'What to produce?' will depend on what is available – perhaps fish and coconuts are readily available. The next question is 'How to produce?' Perhaps someone will cook the fish on a camp fire and someone else will use a rock to split the coconuts. Once you've produced the items, you will need to decide 'for whom to produce?' Perhaps each classmate will be allocated the same amount of produce.



Source 1 The three economic questions all economies must answer

Types of economic systems

There are different types of economic systems that answer the three basic economic questions in a different way. Before we discuss each type of economic system, it is important to understand that political beliefs influence the economic system chosen. In a capitalist economy, there is a belief that resources (natural, labour and capital) used in production should be owned privately. Producers are motivated to provide goods and services for consumers with the aim of making a profit for themselves.

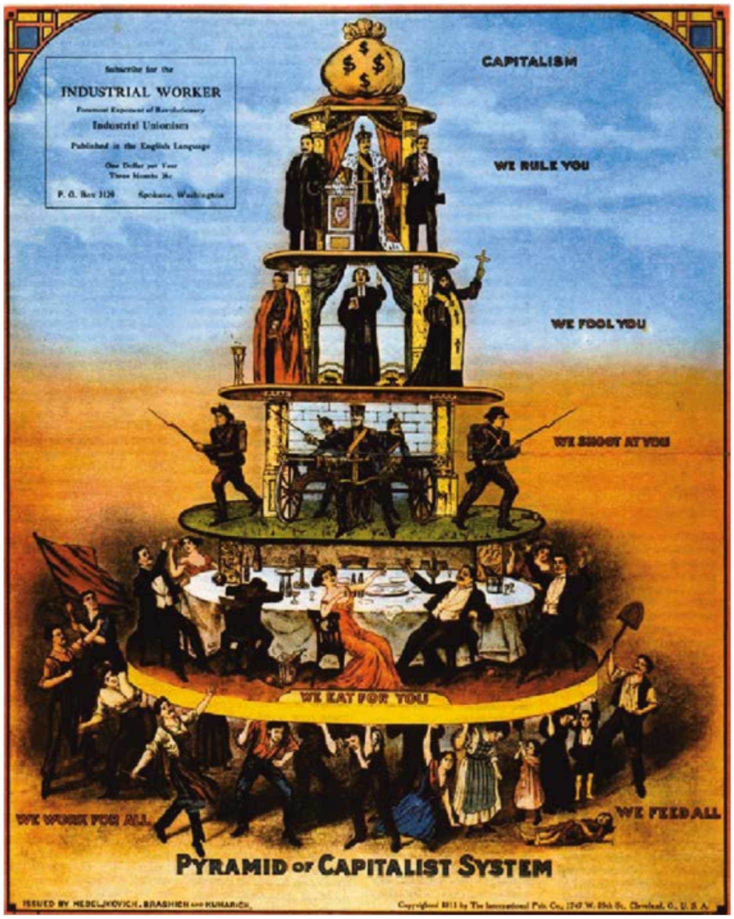
Source 2 If you were stranded on a desert island with your classmates, how would you organise what had to be done?

In a socialist economic system, it is believed that social ownership of resources is much fairer. In many **socialist economies**, this has meant the government (referred to as 'the state') owns all the resources on behalf of the people. Karl Marx, who wrote *The Communist Manifesto* and *Das Kapital*, observed that workers were exploited in the capitalist system and would eventually revolt, overthrowing the rulers and creating a classless society (see Source 3).

1 Traditional or subsistence economy

In a traditional or **subsistence economy**, producers are self-sufficient, producing enough to survive, rather than aiming to make a profit. Money is not used. 'What to produce?' depends on what is available through hunting, gathering and growing food. Shelter is basic. Custom and religious beliefs may influence the question 'How to produce?' Production is usually shared, solving the question 'For whom to produce?'

There are very few subsistence economies in existence. Some villages in rural Alaska are self-sufficient, with its inhabitants fishing and hunting for food. The following case study illustrates how one man in England opted for a subsistence lifestyle.



Source 3 An anti-**capitalism** poster printed in 1911

casestudy

Could you live without money?

Mark Boyle, pictured in Source 4, is also known as the 'moneyless man'. He embarked on a life without money in 2008. He now lives by growing his own food and foraging, scavenging and bartering.

Surviving has led to some creative thinking as Boyle runs his laptop and shower using solar power. His stove is made of huge olive tins. Going to the toilet just requires a spade and some recycled newspaper to use as toilet paper. Toothpaste is no problem when you can make it from cuttlefish and fennel seeds. Nettles found in the forest make a healthy green tea.

Boyle says, 'If we grew our own food, we wouldn't waste a third of it as we do today. If we made our own tables and chairs, we wouldn't throw them out the moment we changed the interior decor. If we had to clean our own drinking water, we probably wouldn't contaminate it.'

Boyle, an Irishman now living in Bath in the UK, is one of a number of individuals who live without money. An American man by the name of Daniel Suelo stopped using money in 2000 and currently lives in a cave in Utah.

Source 4 Mark Boyle lives without money. Could you?

2 Market capitalist economy

In a **market capitalist economy** such as Australia, producers exchange goods and services with consumers in return for money. This exchange takes place in a market, which may or may not be an actual physical space (see Source 5). Producers decide 'what to produce' based on what consumers want and the price they are willing to pay. 'How to produce?' is solved by the producer choosing the most cost-effective method of production. The question 'For whom to produce?' is determined by who has the money to pay for the goods and services. The majority of productive resources (labour, natural and capital resources) are owned by individuals and firms. Most countries, including Australia, the United States, Germany, France, the UK, Malaysia and Japan, have adopted a market capitalist economy.

Source 5 In a market capitalist economy, buyers and sellers come together in what is called a market. When there is an oversupply of a good, the price falls and many consumers will be enticed to buy, clearing the oversupply of goods.

3 Planned capitalist economy

In a **planned capitalist economy**, individuals and firms own the productive resources but the government determines 'what to produce', 'how to produce' and 'for whom to produce'. This type of economy does not currently exist.

4 Market socialist economy

In a **market socialist economy**, the three basic economic questions are answered in the same way as the market capitalist system, but productive resources in this type of economy are mostly owned by the government ('the state') on behalf of the people of the country. The former Socialist Federal Republic of Yugoslavia is considered to have had a market socialist economy.

5 Planned socialist economy

In a **planned socialist economy** it is the government that determines 'what to produce', 'how to produce' and 'for whom to produce'. It is called a planned economy because production takes place in line with the government's long- and short-term plans. The majority of productive resources are owned by 'the state'. In these economies, the emphasis may not be on producing the goods and services consumers want but may be directed to areas the government sees as desirable, such as defence. As a result, shortages of consumer goods may occur. North Korea has a planned socialist economic system. Many consumer goods in North Korea are in short supply and trade in illegal goods through the black market thrives.

The tale of two cows

The tale of two cows (see Source 6) is a simple and humorous story that is commonly used to explain how different economic and political systems work. Here we will use it as a tool to understand the main differences between the economic systems we have been learning about.

1

Traditional or subsistence economy

You have two cows…

You milk the cows and make enough cheese for your own needs. This allows you to feed your own family.

2

Market capitalist economy

You have two cows…

You sell the cows' milk and have enough money to buy a sheep. You sell the wool from the sheep to buy a chicken and then sell the eggs. You're getting rich, but some others in your community might be poor.

3

Planned capitalist economy

You have two cows…

You continue to own the cows but the government tells you what to do. For example, they may want you to produce butter.

4

Market socialist economy

You have two cows…

The government owns your cows but you decide what to produce (perhaps cheese), how to produce and who you will sell your product to.

5

Planned socialist economy

You have two cows…

The government takes your cows, sets up a dairy farm to produce milk and decides who the milk will be sold to.

Source 6 The tale of two cows – how different economic systems work

Check your learning 11.2

Remember and understand

1 What is an economic system?

2 Match the statements below to the correct economic system:

- **a** Firms are told what to produce by the government who owns most of the productive resources.
- **b** Workers produce what they need to survive and money is not used.
- **c** This is a market economy in which productive resources are owned by the state.
- **d** This is a market economy in which productive resources are largely owned by firms and individuals.
- **e** There is no money, and people only produce enough to meet their own needs.

Apply and analyse

3 Explain why very few subsistence economies exist today.

4 What are the advantages and disadvantages of living without money, as Mark Boyle does?

5 Look closely at the anti-capitalism poster (Source 3). What criticism is being made about the capitalist economic system?

Evaluate and create

6 Some North Koreans have recently been willing to pay up to a day's wage for chocolate biscuits called 'choco pies' on the black market. Why might there be a black market for items such as chocolate biscuits in North Korea?

7 Which type of economic system do you think is the best? Why?

11.3 Participants in the Australian economy

Australia has a market capitalist economy. Let's first look at two key participants or players in the Australian economy – consumers and producers, as shown in Source 5. Producers provide consumers with the goods and services they need, and in return consumers spend money buying these goods and services. Some consumers **earn** wages (by providing the resource of labour) to pay for these goods and services.

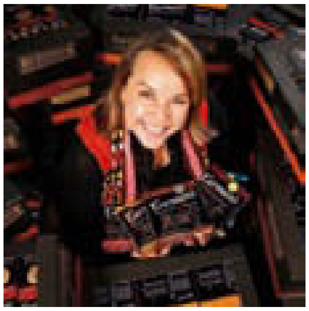
One important characteristic or feature of Australia's economy is **free enterprise**, where individuals can set up a business and make a **profit**. Businesses are expected to pay tax to the government and comply

case**study**

What are some of Australia's booming businesses?

Carman's Fine Foods

When Carolyn Creswell was 18, she used her $1000 in savings to buy a muesli business. Twenty-one years later in 2014, she was ranked 25th on the BRW Young Rich list, with her wealth estimated at $83 million. Carman's Fine Foods produces a range of muesli products that are Australian made and owned. Carman's is a major food retailer, exporting to over 32 countries and employing up to 20 staff.



Source 1 Carolyn Creswell

Adriano Zumbo Patissier

Adriano Zumbo is an Australian patissier and chef. You may have seen him on television making his intricate desserts. After Year 10, Adriano finished school and started an apprenticeship as a pastry chef. Although he now owns six patisseries in Sydney and Melbourne, employing more than 100 staff, Adriano started out small, selling homemade cakes and pastries to local cafes.

Source 2 Adriano Zumbo

Milan Direct

Milan Direct is a market leader in selling designer furniture online and now has the biggest share of the Australian online household furniture market, according to a recent IBISWorld report. Dean Ramler, co-founder and CEO of Milan Direct, comes from a family of furniture makers. Dean's concept of selling designer furniture online only, with no retail store, has paid off. Milan Direct sells its furniture in Australia, the UK and Europe. The company employs 20 staff and is a multimillion-dollar business.

Source 3 Dean Ramler

Shoes of Prey

Jodie Fox, Michael Fox and Mike Knapp didn't think that their business idea for Shoes of Prey in 2009 would become a multimillion-dollar business within two years. The concept was unique, though, as the customer can design their own shoes using the 3D designer. The business has five offices globally and employs 150 staff.

Source 4 Jodie Fox

with regulations. Businesses similar to those in the case study benefit the economy because the government is able to collect more tax (boosting its **revenue**), consumers are provided with goods and services, and individuals are employed and earn a wage. The individuals in the case study used their own resources to establish their businesses.

The Australian economy doesn't just consist of consumers and producers. The government and financial institutions also play an important role, as outlined in Source 5.

Economic decisions made by any of the participants in Source 5 will have economic consequences. For example, if you decide to set up your own IT business, you will need capital equipment such as computers, desks and chairs. People will be employed making these capital products, and you may also have to employ IT consultants and administrators to help you run the business. These people will in turn earn wages, and they will spend their earnings on more goods and services after they have paid tax to the government. Some of the wages earned will also be saved by financial institutions, which will then use those savings to lend to consumers. In this way, participants in the Australian economy are interconnected.

The overseas sector, where we are linked to international markets, is another key part of the Australian economy.

Australians buy imported goods and services from other countries and we also export goods and services overseas. This trade with other nations directly affects our economic welfare. There are many factors that influence trade, especially the constantly changing **exchange rate**. The exchange rate is the value of one country's currency when swapped with another country's currency. For example, $1 in Australian currency might be worth 72 US cents. If the Australian dollar rises in value against other currencies, it means Australian exports will be more expensive and imports cheaper. If the Australian dollar falls in value against other currencies, Australian exports will become cheaper and imports will become more expensive (see Topic 11.4 for more information on Australian trade).

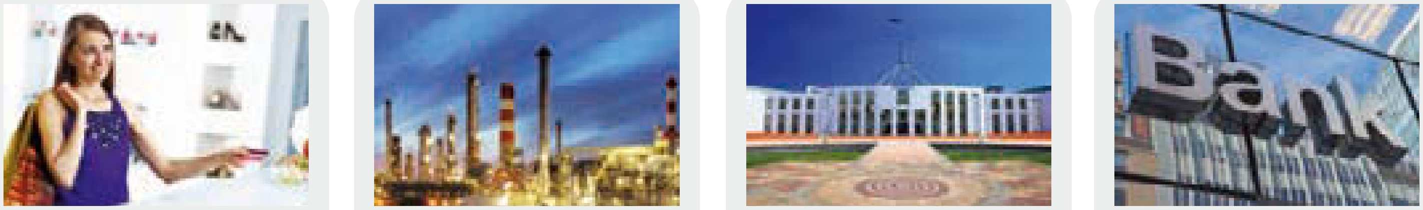
Australia and the global economy

Globalisation is a term you will have heard before, probably in the news. It means that all the countries of the world are linked and should be seen as one worldwide, or global, economy.

Australia is linked to the global economy because of:

- trade with other nations – we import goods and services made overseas into Australia, and export goods and services from Australia to other countries
- foreign direct investment – foreign funds used to establish new or existing businesses in Australia
- an international market for labour – Australians work overseas and people from other countries come to work in Australia
- technology – allowing us to quickly and efficiently communicate with potential customers all over the world
- **migration** – settlers come to live in Australia.

Australian businesses are crucial to the economy's success and have had to adapt to the changing business environment. Many businesses now source products from overseas or have part or all of their products made overseas.



Consumers

- buy goods and services
- earn wages and salaries
- pay taxes
- receive government benefits
- save

Producers

- produce goods and services
- aim to make profit
- pay wages
- pay taxes
- borrow money
- import and export goods and services

Government

- charge taxes
- pay wages
- spend on goods and services
- provide benefits, payments and services to Australians
- borrow money

Financial institutions

- hold savings
- lend money
- aim to make a profit
- pay taxes

Source 5 Key participants in the economy are consumers, producers, the government and financial institutions.

case**study**

Where are your clothes made?

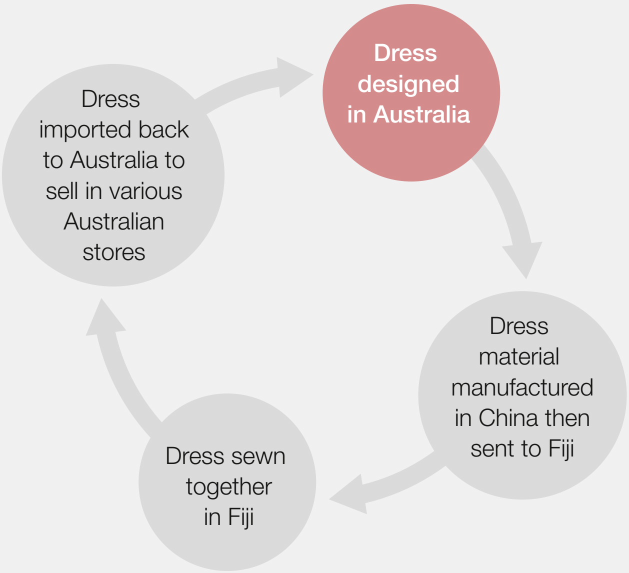
The garment trade and sweatshops

It's highly likely the clothes you are wearing were not made in Australia. Have a look at the labels on your clothes and you might discover where they were made. Australian retailers such as Rivers, Coles, Target, Kmart and Cotton On order clothes from factories in Bangladesh. Bangladesh is one of the cheapest locations to make clothes, because wages are so low. Four million people work in the Bangladesh garment **industry**, typically working 12 hours per day. China, India and Cambodia also supply Australia with cheap clothing.

The global garment trade came under scrutiny and inspired protests (see Source 7) when more than 1100 people died in a garment sweatshop in Dhaka, Bangladesh, in 2013. This particular sweatshop was making clothes destined for the US and Europe. Building inspectors had requested the building be evacuated the day before it collapsed, but supervisors at the sweatshop declared it to be safe.

Challenges for Australian fashion businesses

At the higher end of the fashion market, many Australian designers are struggling to keep their businesses afloat. Perth fashion designer Poppy Lissiman, for example, has put her fashion label on hold while investigating having her garments manufactured overseas to cut the costs of production.


Dress designed in Australia
Dress material manufactured in China then sent to Fiji
Dress sewn together in Fiji
Dress imported back to Australia to sell in various Australian stores

Source 6 Many Australian designers have their clothes made overseas.

Source 7 An anti-sweatshop protest in Washington, D.C.

Fierce international competition has also led some designers to close their businesses. Smaller businesses in particular may struggle, as some large manufacturers overseas will only do business if the order is substantial. Online shopping has also had a significant impact on local fashion designers.

Some Australian fashion designers have managed international success, however. Australian fashion

stop
GAP
sweatshops!

designers Peter Strateas and Mario-Luca Carlucci launched their label during Paris Fashion Week. They bypassed Australia and went straight to the Paris catwalk with their striking designs, and now have 20 stockists around the world.

Source 6 shows how a dress might be made in various parts of the world – it's the process of globalisation in action.

Check your learning 11.3

Remember and understand

1 Imagine you set up a hairdressing salon.
  a What service are you providing for the consumer?
  b What does the consumer give you in return for cutting their hair?
  c List some of the costs you incur as the owner of your hairdressing salon.
  d In what ways does the government affect your hairdressing business?
  e Why might you need the services of a financial institution such as a bank in running your business?
2 List the economic consequences of opening up a new restaurant in your area.
3 Explain what happens to the price of exports when the Australian dollar rises.
4 Explain why Australia is part of the global economy.

Apply and analyse

5 In 2014, ALCOA (a metals and engineering company operating in 31 countries) closed its Point Henry aluminium smelter and two rolling mills. List the economic consequences of this decision in relation to:
  a employment
  b taxes
  c government payments, such as unemployment benefits.
6 List five businesses that sell their products or services worldwide.
7 Would companies such as Milan Direct and Shoes of Prey have been successful if they had not sold their products overseas? Why/why not?
8 Take a few minutes to daydream.
  a If you were going into business, what product or service would you be most interested in selling?
  b Is there an international market for your product or service?
  c How will your product or service stand out from other products on the market?

11A rich task

The decline of the automotive industry in Australia

Increased competition from overseas is one of the adverse effects of globalisation. This has led to some business closures in Australia.

Mitsubishi closed its last Australian car manufacturing plant in 2008. Holden, Toyota and Ford no longer manufacture cars in Australia (see Source 1). GM Holden boss Mike Devereux declared, ‘As painful as it is to say, building cars in this country is just not sustainable.’

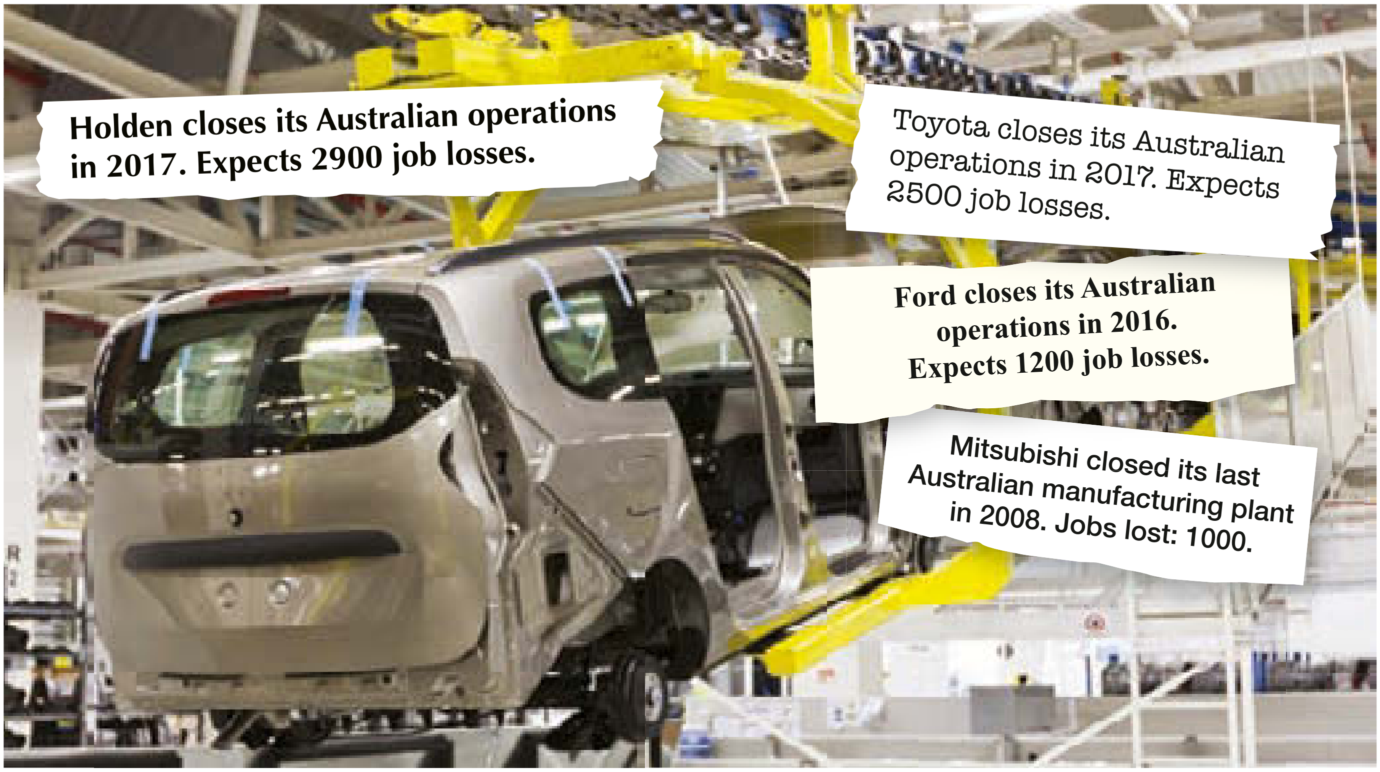
Reasons for the decline in the Australian automotive industry include:

- Pressure from imports. Australians now have 65 brands and 365 car models to choose from, making it the most competitive automotive market in the world.
- The more cars that are produced, the cheaper they become, and Australia did not produce cars in large enough volumes.
- The high Australian dollar made our exported cars more expensive overseas and imported cars cheaper in comparison.

The Holden, Ford and Toyota closures have also sparked concern for those businesses supplying car parts. Lawyer Evan Stents, who specialises in the automotive industry, raised concerns about job losses in those businesses supplying car parts. In relation to Ford he said, ‘For every one manufacturing job at Ford, there are probably another four jobs that are threatened in the parts industry.’

Workers made redundant have their own personal tale to tell. Fifty-five-year-old Moji Behbahani, who has worked for Ford for 23 years, described losing his job, his hands shaking.

‘I have to work,’ Mr Behbahani said. ‘I have so many friends there, it is like a second family.’



Holden closes its Australian operations in 2017. Expects 2900 job losses.

Toyota closes its Australian operations in 2017. Expects 2500 job losses.

Ford closes its Australian operations in 2016. Expects 1200 job losses.

Mitsubishi closed its last Australian manufacturing plant in 2008. Jobs lost: 1000.

Source 1 The end of car manufacturing in Australia

skill**drill**

Identifying the consequences of business decisions

Businesses make decisions all the time, such as whether to hire staff or produce a new product using sustainable resources. The closure of a business is an example of a decision that can have far-reaching consequences, not only for the business owners and staff, but for the economy as a whole. Identifying the consequences of a business decision is vital to:

- reduce unwanted side effects
- provide assistance to those who are affected by the decision
- turn a negative business decision into a positive outcome.

Step 1 Clarify exactly what you are being asked to do. You must specifically ‘identify consequences’. Consider using a dictionary for the meaning of ‘identify’ and ‘consequence’. It is also helpful to find synonyms for these words. Rewrite the task if it is easier for you so that ‘identify consequences of a business decision’ becomes ‘look for the effects or outcomes of the business decision’.

Step 2 Be clear about what business decision has been made and try to state the decision in just one sentence.

Step 3 *Who* will be affected by the business decision? Identify groups/people that will be affected by the decision.

Step 4 *How* will groups/people be affected by the business decision? Identify how each group might be affected by the business decision. Brainstorm possible effects on each group.

Apply the skill

Identify the consequences of cars not being made in Australia anymore.

1 Read the information provided on the decline of the automotive industry in Australia, then copy the following table (adding as many rows as you need) and fill it out. Remember that the information provided will not provide all the answers; you will have to think about how the decision will affect certain groups yourself. The first answer has been done for you.

Those affected by cars not being made in Australia	How groups/people will be affected by not making cars in Australia
Car manufacturer	Their business will now survive and operations will continue in other countries where profit can be made. Car sales may decline in this country. Redundancy payments (when the employer makes a payment to the employee whose job is no longer needed) will need to be made, affecting profit outcomes. The factory site will be sold and some of the proceeds returned to the company.

2 Write 2–3 paragraphs about the consequences of the decision to stop car manufacturing in Australia.

Extend your understanding

Identify another industry in Australia that is in decline.

1 Use the following table to help you identify who will be affected and how they will be affected by the decline of the industry. Search the internet for more information.

Those affected by the decline of the industry	How groups/people will be affected by the decline of the industry

2 Write 2–3 paragraphs about the consequences of the decline of this industry in Australia.

11.4 Australia's place in Asia and the global economy

Australia's economy is relatively small by global standards, representing around 2 per cent of the world's production. Nevertheless, international trade – buying from and selling goods and services to other countries – is important to us.

Australia is both an exporter and importer of goods and services. Exports are goods and services produced locally and sold overseas. Australia exports around one-fifth of what it produces. Examples of Australian exports include beef, wheat, pharmaceuticals, wine, beer, and education and travel services. Imports are goods and services produced overseas and sold to Australia. Australia imports the equivalent of around one-fifth of its production. Examples of goods and services imported by Australia include cars, computers, telecommunications equipment and personal travel services.

Australia has an abundance of natural resources such as coal, iron, copper, gold, natural gas, uranium and renewable energy sources (see Source 1). These types of natural resources are sometimes referred to as commodities. These natural resources have been in high demand by Asian countries, particularly China, for the manufacture of consumer goods sold around the world. China's recent economic slowdown has, however, resulted in falling commodity prices.

Source 1 Australia is rich in natural resources such as gold, which we export to the world. Australia is one of the largest gold producers in the world.

Australia is not a large exporter by world standards (see Source 2). Trade with other nations is important, though, because:

- Australia earns money by exporting our goods and services
- international trade provides employment for both Australians and people overseas
- Australia can buy products it does not produce itself from other countries
- Australia can sell products that other countries need.

In addition to the exchange of goods and services between Australia and the rest of the world, other countries invest directly in Australia by setting up business or expanding their existing business operations in Australia. Chances are your favourite chocolate bar was made in Australia, but the company that produced it was the foreign-owned British company Cadbury.

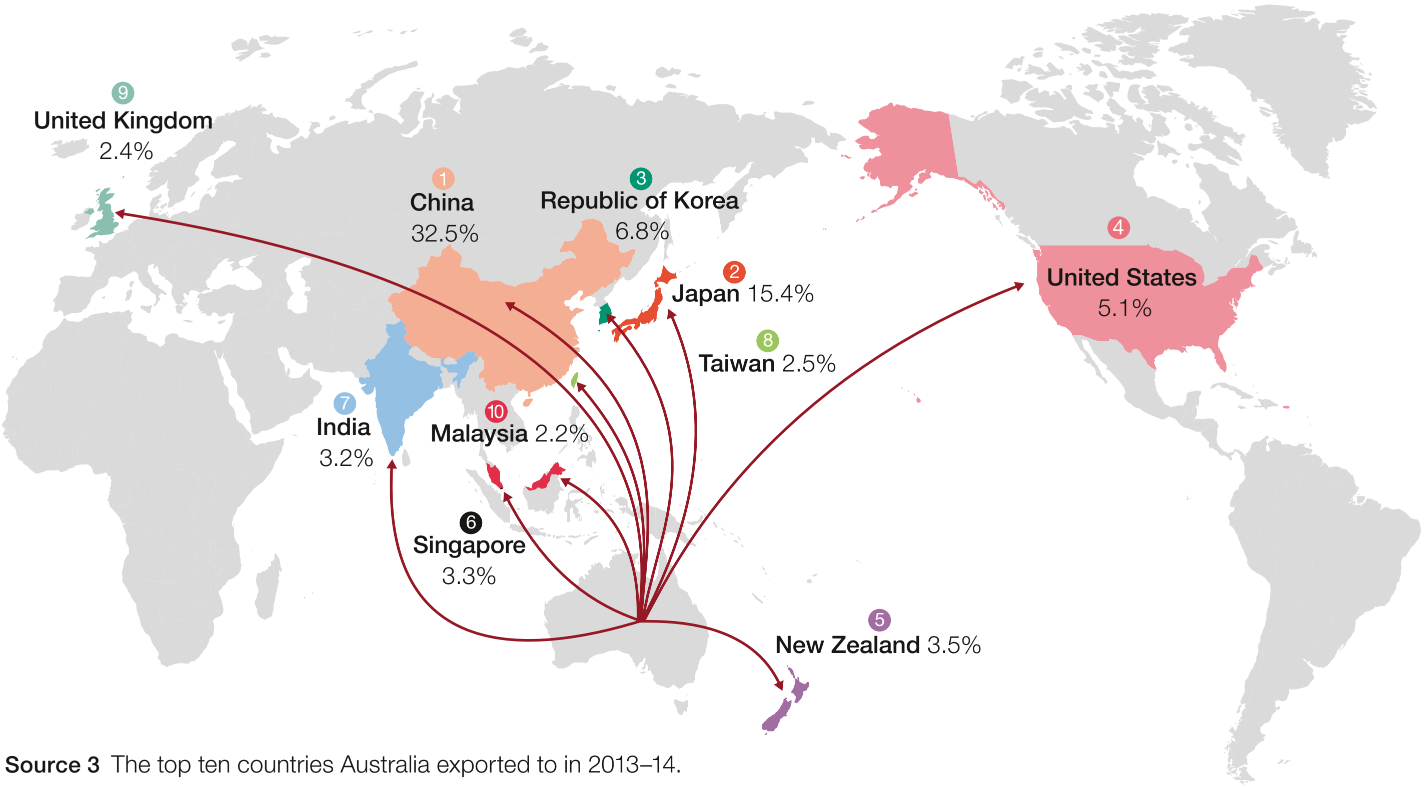
The top 30 exporting countries

1	China	11	United Kingdom	21	Switzerland
2	European Union	12	Mexico	22	Saudi Arabia
3	United States	13	Canada	23	Thailand
4	Germany	14	Singapore	24	Malaysia
5	Japan	15	Russia	25	Poland
6	South Korea	16	United Arab Emirates	26	Brazil
7	France	17	India	27	Australia
8	Hong Kong	18	Taiwan	28	Vietnam
9	Netherlands	19	Belgium	29	Turkey
10	Italy	20	Spain	30	Indonesia

Source 2 This table, constructed using figures from the CIA World Factbook website, shows the ranking of countries according to the value of export goods in 2015.

Australia’s major trading partners

The United Kingdom was Australia’s major trading partner in 1900, receiving nearly 60 per cent of all Australian exports. This was because Australia was once a British colony and had strong historical ties with Britain. This strong relationship continued into the 1950s, seeing Australia trading mainly with the United Kingdom and other European countries. Since then, there has been quite a dramatic shift in the countries we predominantly trade with. As you can see in Source 3, the United Kingdom now only receives 2.4 per cent of our exports, while China receives almost a third of our total exports of goods and services.



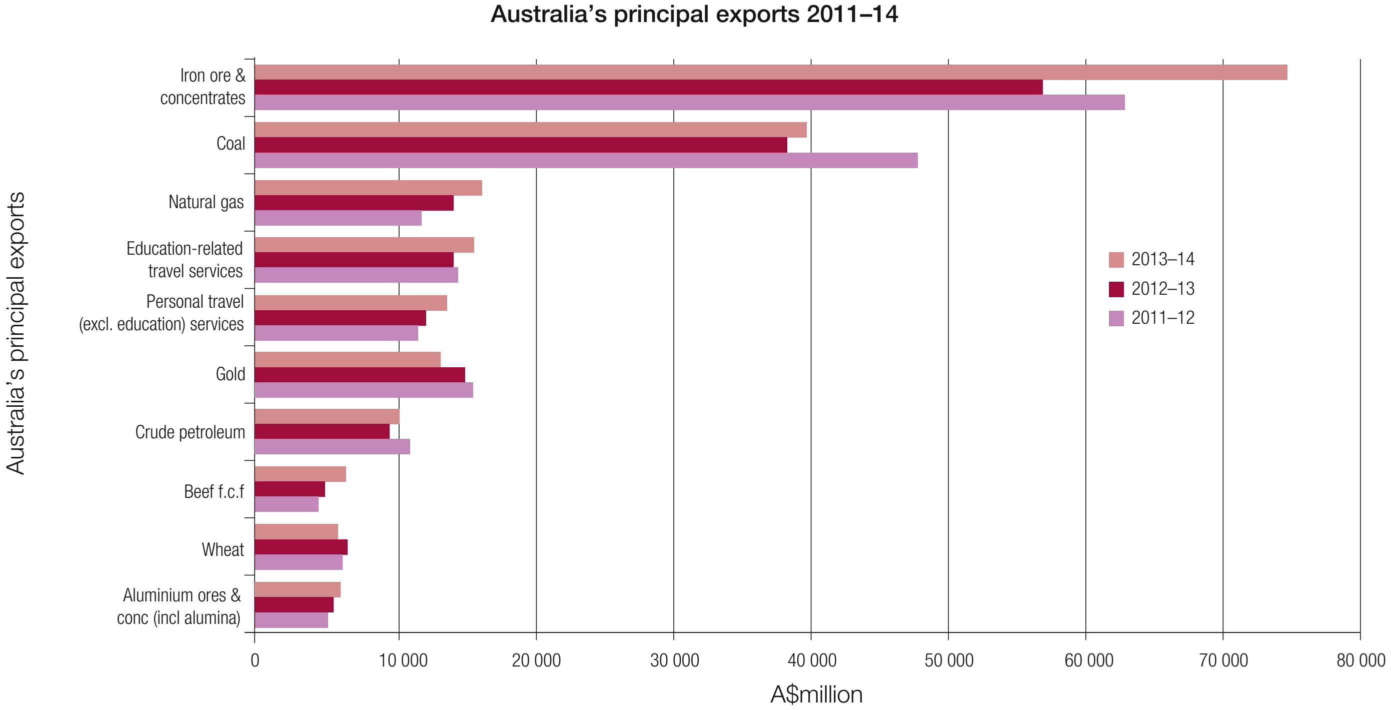
Source 3 The top ten countries Australia exported to in 2013–14.

What Australia imports and exports

What Australia imports and exports is called the ‘composition’ of trade. Nearly 78 per cent of our exported goods in 2013–14 were in **primary products**. These are products that are produced from raw materials and are not manufactured. Nearly 16 per cent of our exported goods in 2013–14 were manufactured goods. Agriculture, fishing, mining, and forestry are examples of primary industries. Referring to Source 5, count how many of Australia’s major exports are primary products.

Nearly 72 per cent of all the goods we imported in 2013–14 were manufactured products and just over 24 per cent of imports were primary products. Refer to Source 9 and count how many of Australia’s major imports are primary products.

Source 4 Primary products make up 75 per cent of Australia's exports.



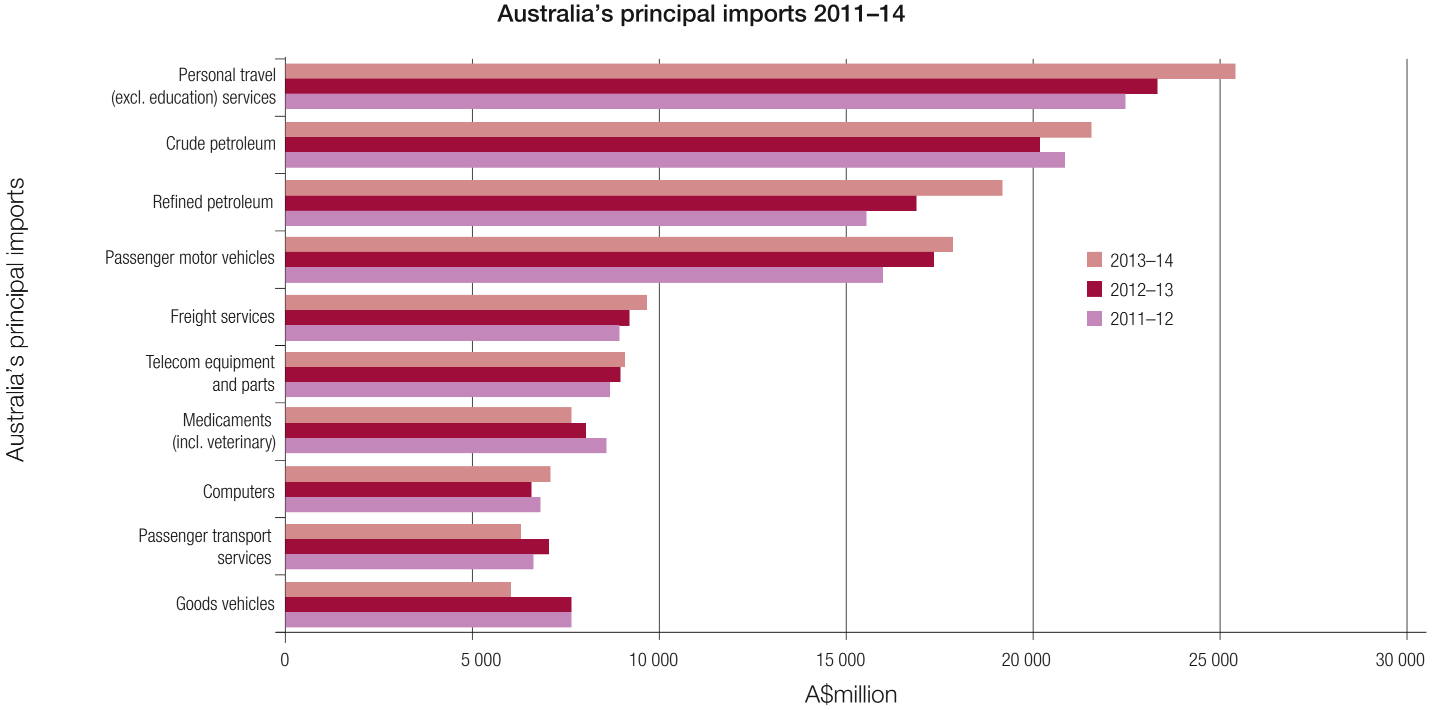
Source 5 This chart shows Australia's principal exports. Iron ores and concentrates are Australia's largest individual export items.

Source 6 This iron ore mine in Kalgoorlie, Western Australia, is one of the largest artificial holes in the world. Iron ore and other mineral concentrates are by far Australia's largest export.

999.9
1000g
FINE GOLD
999.9

Source 7 A huge coal loader prepares shipments of Australian coal for export to China. Coal is Australia's second-largest export.

Source 8 In 2013–14, gold represented Australia's sixth-largest export.



Source 9 This chart shows Australia's principal imports. Many Australians travel. Our top import from 2010 to 2013–14 was personal travel services.

Source 10 In 2013–14, Australians travelled overseas in record numbers. Personal travel services, that is people travelling overseas for holidays, is Australia's largest import, with countries such as Indonesia, Thailand and the United States among the hottest destinations.

Source 11 Crude petroleum, used to manufacture a range of products from petrol to plastics, is Australia's second-largest import.

TOYOTA
FT-86

Source 12 Passenger vehicles manufactured overseas in countries such as Japan, Korea and Germany are Australia's fourth-largest import.

case**study**

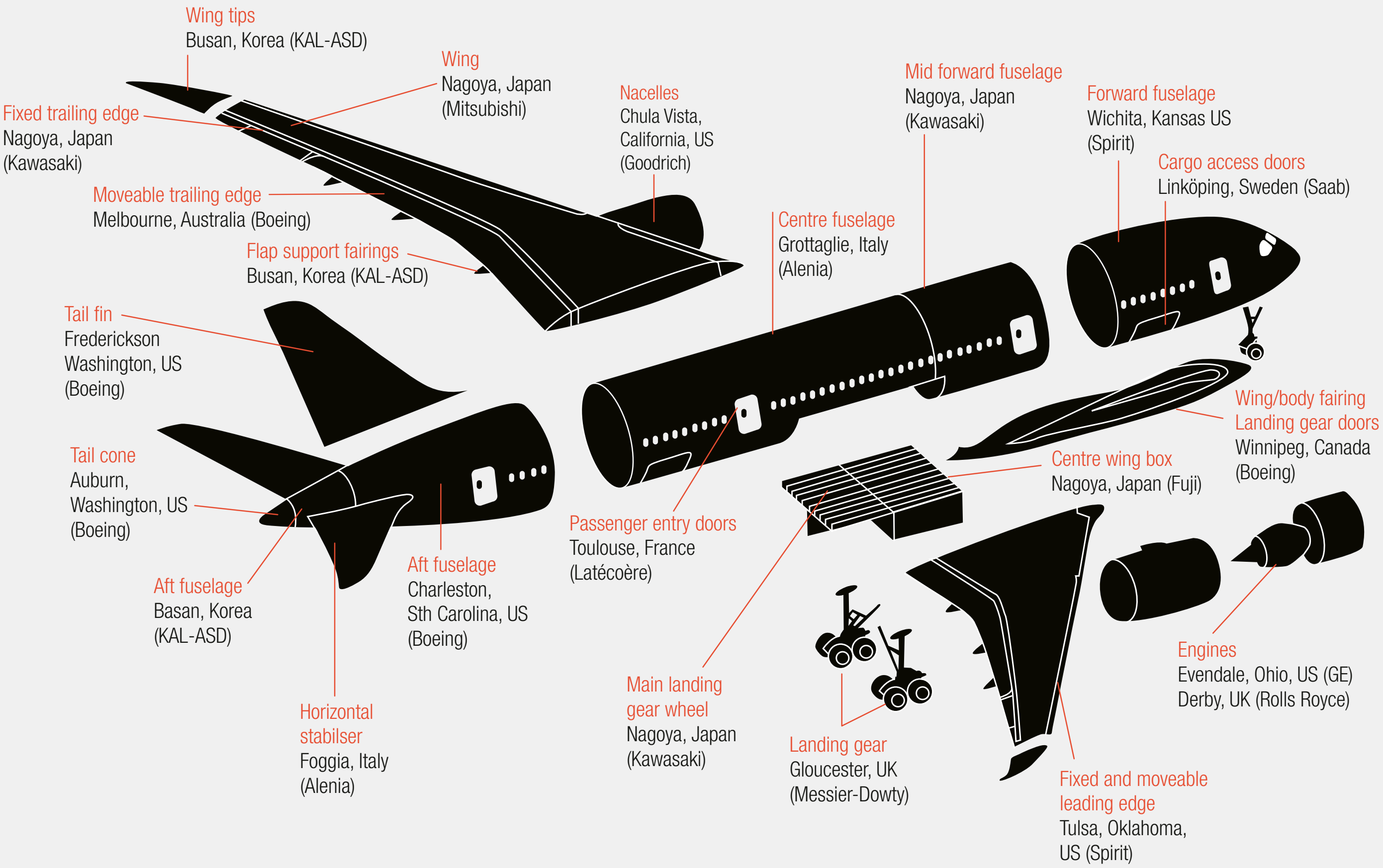
How do you make a plane these days?

Soon there might have to be a label that reads 'Made in the world'. Products are increasingly being created internationally. A product may, for example, be designed, manufactured, assembled and marketed in several different countries.

The Boeing 787 Dreamliner is an example of a global product. Source 14 shows that the plane's parts or components are sourced from countries all over the world. Part of the plane's wing is designed and produced in Melbourne at Boeing Aerospace Australia. Assembly takes place in the United States.

Producing a global product may be beneficial for a number of reasons. The latest information technology in the world can be sourced. Costs of production may also be reduced by choosing the country that can assemble or produce the components the most cheaply.

Source 13 The Boeing 787 Dreamliner took to the skies for the first time on 15 December 2009.


Wing tips
Busan, Korea (KAL-ASD)
Wing
Nagoya, Japan
(Mitsubishi)
Nacelles
Chula Vista,
California, US
(Goodrich)
Mid forward fuselage
Nagoya, Japan
(Kawasaki)
Forward fuselage
Wichita, Kansas US
(Spirit)
Cargo access doors
Linköping, Sweden (Saab)
Fixed trailing edge
Nagoya, Japan
(Kawasaki)
Moveable trailing edge
Melbourne, Australia (Boeing)
Flap support fairings
Busan, Korea (KAL-ASD)
Centre fuselage
Grottaglie, Italy
(Alenia)
Tail fin
Frederickson
Washington, US
(Boeing)
Wing/body fairing
Landing gear doors
Winnipeg, Canada
(Boeing)
Tail cone
Auburn,
Washington, US
(Boeing)
Centre wing box
Nagoya, Japan (Fuji)
Passenger entry doors
Toulouse, France
(Latécoère)
Aft fuselage
Basan, Korea
(KAL-ASD)
Aft fuselage
Charleston,
Sth Carolina, US
(Boeing)
Engines
Evendale, Ohio, US (GE)
Derby, UK (Rolls Royce)
Main landing
gear wheel
Nagoya, Japan
(Kawasaki)
Horizontal
stabilser
Foggia, Italy
(Alenia)
Landing gear
Gloucester, UK
(Messier-Dowty)
Fixed and moveable
leading edge
Tulsa, Oklahoma,
US (Spirit)

Source 14 Countries from all over the world work together to make the Boeing 787 Dreamliner.

Source 15 The cockpit of a Boeing 787 Dreamliner

Source 16 The economy cabin of a Boeing 787 Dreamliner

Check your learning 2.4

Remember and understand

1. What is the difference between an import and an export?
2. Which two countries receive the largest proportion of Australia's exports?
3. Describe the change in Australia's major trading partners from the 1950s to today.

Apply and analyse

4. What type of products does Australia mostly export and why?
5. Why can trade with another country affect employment?

Evaluate and create

6. The following is a list of the top 10 countries Australia sourced its imports from in 2013–2014:
   Malaysia 3.8%, United States 12.2%, Japan 6.3%, Singapore 5.5%, Thailand 3.9%, China 15.4%, Germany 4.1%, United Kingdom 3.7%, New Zealand 3.3%, Republic of Korea 3.6%
   - a Rank the countries in order from 1 to 10. Number one ranking is the country we import from the most.
   - b Using these statistics, create a bar chart (either in Excel or by hand) to display the top 10 countries we import from.
7. Describe Australia's place in the global economy in relation to the following:
   - a our world ranking as an exporter
   - b the total percentage of world exports Australia produces
   - c the total percentage of world production Australia is responsible for.
8. Go to the Department of Foreign Affairs and Trade website and select the 'Countries and regions' section. Each country has a fact sheet. Choose a country you are interested in and create a PowerPoint presentation of our trading relations with that country. Include the following:
   - a a map showing where this country is in relation to Australia
   - b the major goods and services exported and imported between the countries
   - c the total value of our exports and imports with this country
   - d our trade relations and trading history with the country.

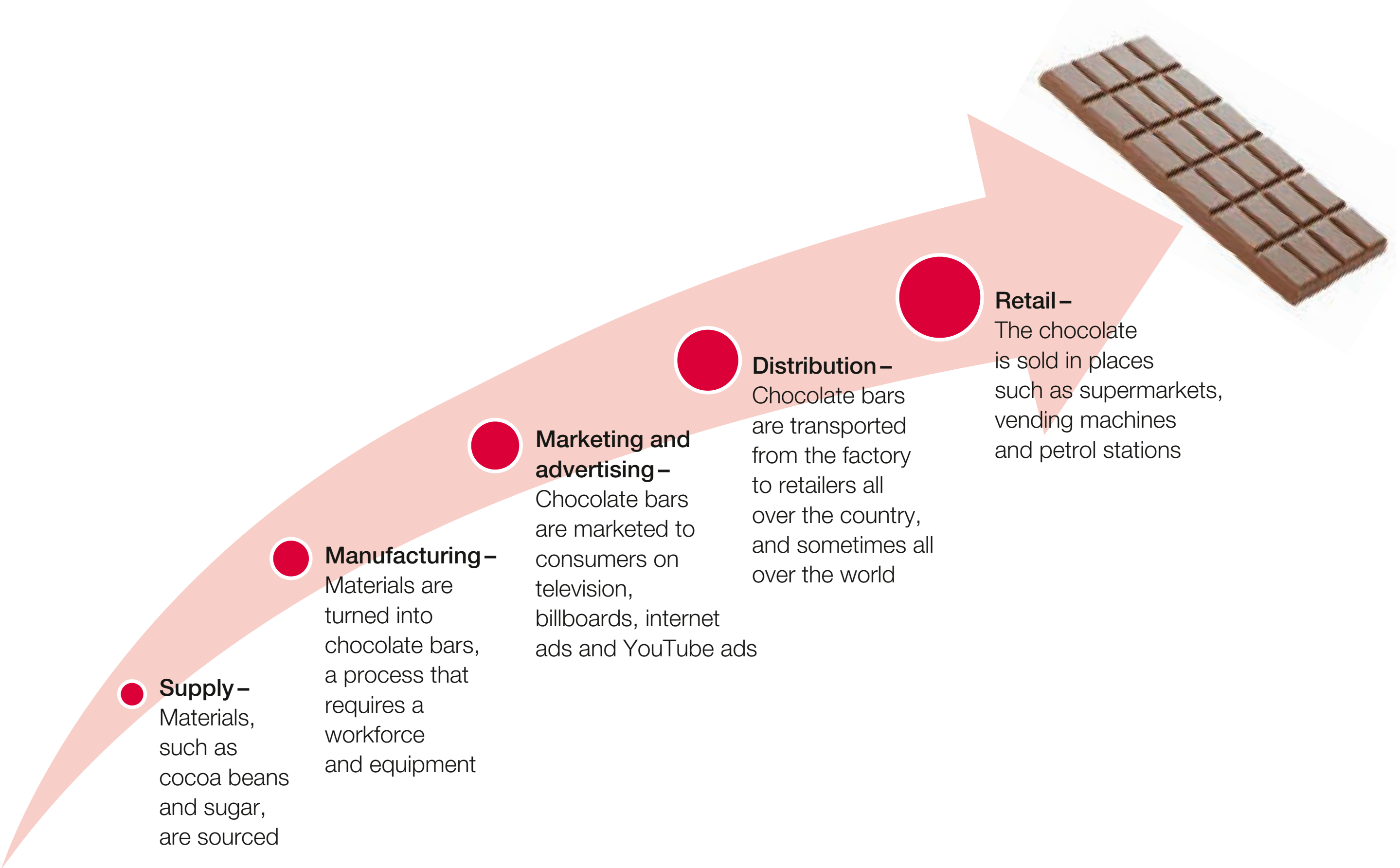
11.5 The global supply chain

What is the supply chain?

A **supply chain** refers to the many links or activities that are required to move a product or service from a supplier to a consumer. Source 1 provides a broad summary of the supply chain for a chocolate bar. To make chocolate, raw materials such as cocoa beans and sugar must first be sourced. At this stage, farmers, labourers, transport workers and contractors may enter the supply chain. Australia has only just begun to grow cocoa beans so most of the cocoa beans used to make a chocolate bar might be sourced from plantations all over the world in countries such as Brazil, Ecuador, Papua New Guinea and parts of Africa and Asia. Other ingredients such as sugar may be sourced from Australia or other major sugar producers such as Brazil and India.

You can begin to see that a simple chocolate bar involves many different workers often from many different countries. The manufacture or making of chocolate may take place within Australia or overseas so we can add factory workers and managers, technicians, cleaners and transport workers to the supply chain. The Cadbury chocolate manufacturing process, for example, begins in Singapore where the cocoa beans are processed into cocoa mass, which is a combination of cocoa and cocoa butter. This mass is then transported to factories in Victoria and Tasmania.

Once chocolate is made, it needs to be packaged, so this may involve packaging companies, graphic designers, marketers and advertisers entering the supply chain. When the product is ready for sale it must be distributed and sold in stores and vending machines, requiring another set of workers from buyers to shop assistants, warehouse supervisors and truck drivers.



Supply – Materials, such as cocoa beans and sugar, are sourced

Manufacturing – Materials are turned into chocolate bars, a process that requires a workforce and equipment

Marketing and advertising – Chocolate bars are marketed to consumers on television, billboards, internet ads and YouTube ads

Distribution – Chocolate bars are transported from the factory to retailers all over the country, and sometimes all over the world

Retail – The chocolate is sold in places such as supermarkets, vending machines and petrol stations

Source 1 Supply chain for a chocolate bar

Dependence on other countries in the supply chain

All countries need to import goods and services to meet the demands of consumers at home. Many products we buy are not produced in Australia. Even services may be sourced from overseas, such as technical support required for mobile phones and computers. Many companies in Australia **outsource**, using resources outside of their business, often overseas. For example, the Australian boot company Blundstone now makes most of its boots in India and Thailand. Australia's airline Qantas outsources the heavy maintenance of its remaining 747-400 airliners overseas.

There are several reasons why we import some of our goods and services from other countries. One major reason is that production costs may be lower, allowing goods and services to be produced at a cheaper cost than would be possible at home. Wages, for example, are a cost of production and in many countries the minimum wage that can be paid to workers may be much lower than in Australia. According to latest figures from the **Fair Work Commission**, the minimum hourly rate in Australia is $17.70 compared with a minimum hourly rate in some other countries that may range between $1.68 and $3.98.

The natural resources each country possesses, such as forests, petroleum and coal, may determine what a country can produce. Climatic conditions also play a role in production decisions. For example, the cocoa tree only grows in hot, rainy and tropical climates, so countries such as Iceland would be unable to grow these trees in the open.

Source 2 Cocoa pods hanging from a tree in Huayhuantillo village near Tingo Maria in Peru. We source our cocoa beans overseas. Australia's cocoa industry is only just beginning, with some plantations in Queensland producing cocoa for boutique chocolate that is truly made in Australia.

Importing goods and services means that we rely on other countries to produce the goods and services we use. Many consumers are becoming increasingly concerned about imported foods and the safety standards that are used in various countries in the supply chain. For example, in 2015, some consumers who ate imported frozen berries contracted hepatitis A. As a result, a new system to ensure clearer food labels showing country of origin was introduced by the Federal Government so the consumer can decide whether they wish to buy a product made overseas.

Source 3 Food companies should be aware of the safety standards used in their supply chains. In 2015, frozen berries gave some consumers hepatitis A.

Transnational corporations in the supply chain

A **transnational corporation** is a company that operates in more than one country. Transnational corporations don't consider their home to be any particular country as they are a worldwide business. The food and drink company Nestlé is an example of a transnational company. Nestlé produces global brands such as Nescafé coffee and the Kit Kat chocolate bar. Nestlé has its global headquarters in Switzerland, has factories in 85 countries and employs 335 000 people worldwide. It is thought that by spreading the business geographically across the world, the company can respond more quickly to customers' needs at a local level. General Electric, Siemens and Toyota are other examples of transnational corporations.

Transnationals bring many benefits to the country they operate in. They provide employment opportunities and, because of their size, may be able to buy a failing Australian business and improve its business prospects through providing the capital required (such as machinery) to expand the business, make a profit and compete on a global scale.

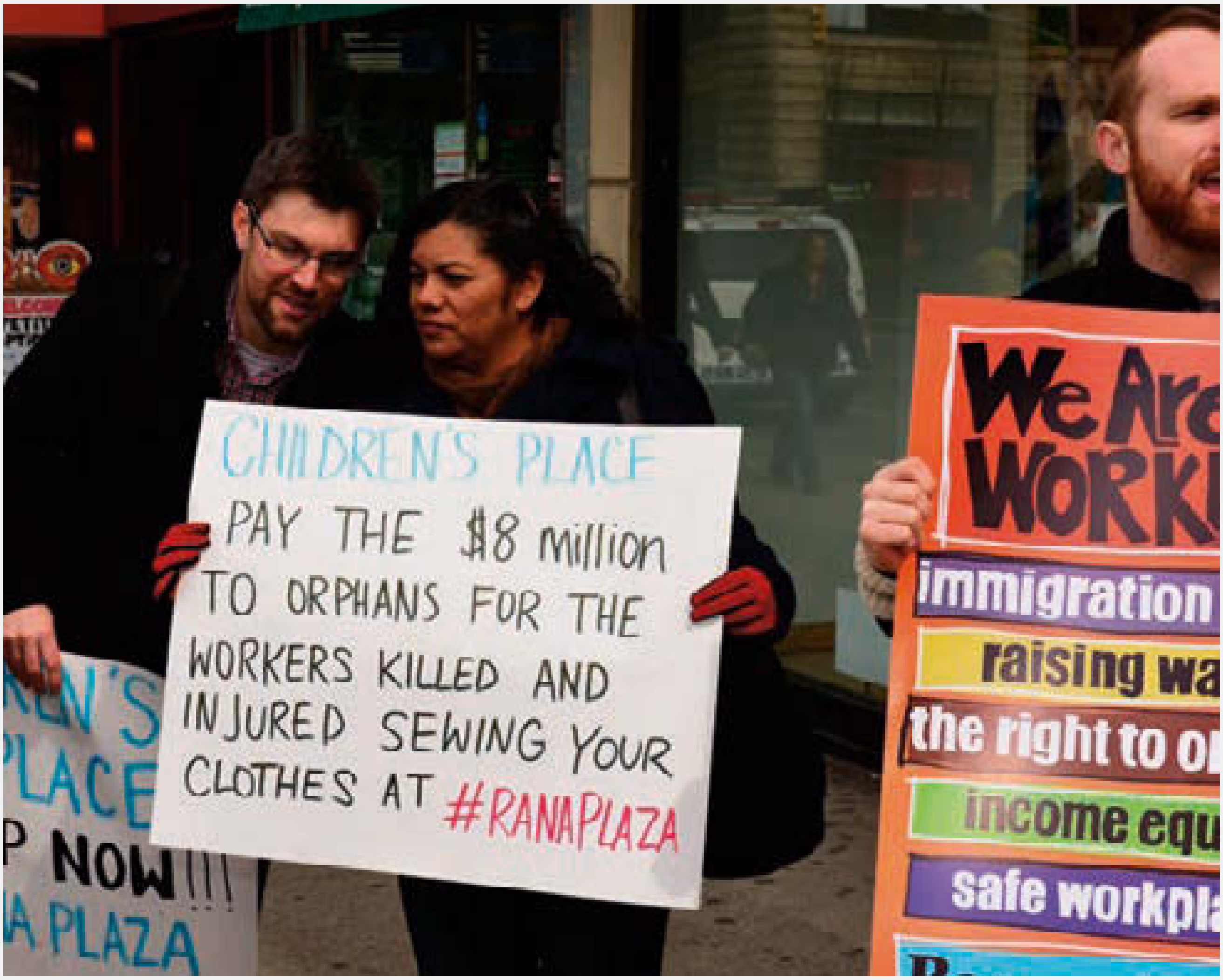
Some transnationals, however, have been criticised for contributing to pollution and threatening the health and environment of those who live in the country where the transnational operates. Some transnationals in the garment trade have been criticised for not taking enough care to ensure their supply chains are socially responsible.

case**study**

Who made your T-shirt?

The T-shirt you are wearing is most probably not made in Australia. Perhaps it was made in Bangladesh, because wages are much lower there. Wages are a significant cost of production and if they are low it means the costs of production are lower. Low wages mean not only cheaper clothes but also higher profits for businesses that sell clothing. Unfortunately it is the worker who is sometimes exploited.

Transnational companies have a responsibility to ensure that workers who are part of their supply chain are working in safe conditions and are paid appropriately.


CHILDREN'S PLACE
PAY THE $8 million TO ORPHANS FOR THE WORKERS KILLED AND INJURED SEWING YOUR CLOTHES AT #RANAPLAZA
We Are
WORK
immigration
raising wa
the right to o
income equ
safe workpl
P NOW!!!
A PLAZA

Source 4 An anti-sweatshop protest

The impact of global events on the supply chain

Australia is part of the world or global economy and is therefore affected by events overseas. Natural disasters such as tsunamis and earthquakes can have an impact on supply chains. For example, the earthquake and tsunami in Japan in 2011 slowed down the manufacture of Toyota cars in Australia. This is because Australian manufacturers relied on Japanese factories to supply them with parts that could not be accessed in the aftermath of the natural disaster.

Political unrest in and between countries can also affect the flow of trade and therefore our supply chains. For example, in 2014, Russia imposed a ban on food imports from many Western countries, including Australia, in retaliation for sanctions imposed on Russia caused by its military intervention in the Ukraine. This ban was extended in 2015 and impacted Australian agricultural exporters who had to find new markets for their products.

Disruption to the importing of oil to Australia is another factor that could disrupt Australia's supply chains, affecting our production and transport systems. Australia is oil dependent, importing just over 90 per cent of its crude oil and refined petroleum from the Middle East.

Source 5 The manufacture of Toyota cars in Australia slowed down after the tsunami and earthquake in Japan, 2011.

Check your learning 11.5

Remember and understand

1 What is a supply chain?
2 Give an example of a transnational corporation.
3 Why are transnational corporations that produce clothes sometimes criticised because of their supply chains?
4 Give one reason why another country may be able to produce a product more cheaply than Australia.

Apply and analyse

5 Imagine a disease wipes out all cocoa trees in Africa, the world's largest cocoa-growing region. How will this affect the supply of chocolate bars in Australia?
6 Why does Australia import goods and services from other countries?

Evaluate and create

7 Make a list of five products you or your family would normally buy from the supermarket on a weekly basis. Do some research using the Internet and the packaging of those products to uncover where that product or its ingredients are from. Present your findings as a poster that maps the supply chain of these five products.
8 Some chocolate producers have been criticised for not ensuring that workers who are part of their supply chain are not exploited. Use the Internet to find out what fairtrade chocolate is and how it can protect cocoa farmers and their families
9 Pick at least four food items from your pantry or refrigerator and fill in the following table.

Food item	A Was it made in Australia? B Was it totally made overseas? C Was part of it made overseas?	If the product was made totally or partly overseas, suggest reasons why this might be the case.
1		
2		
3		
4		

11B rich task

The rise of China as Australia's largest trading partner

China is Australia's largest trading partner. China's economic reforms in the 1970s saw it change from a planned socialist economy to a more market-based economy. China also increased its trade with the rest of the world, reducing its **tariffs** (taxes on imported goods and services) and other barriers to trade.

The China–Australia Free Trade Agreement was signed between Australia and China in 2015. When the agreement is fully implemented, 95 per cent of Australian exports to China will be tariff-free. That means Australia's goods and services will be cheaper to buy in China, so the hope is that demand for Australian exports will rise. Australian tariffs on Chinese imports will also be eliminated over time, resulting in lower prices and greater availability of Chinese products in Australia.

Since 1979, China's economy has grown very rapidly. It is estimated that this growth has helped around 500 million people in China to move out of extreme poverty. This growth has led to higher **living standards** and increasing urbanisation, as people move from farms to large cities to live and work. China is now the second-largest economy in the world behind the United States.

Major Australian exports to China include iron ores and minerals, coal, gold and crude petroleum. These exports are needed for China's huge manufacturing industries, which produce consumer goods sold throughout the world. Major Chinese imports into Australia include telecommunications equipment and parts, clothing, computers, furniture, mattresses and homewares.

In the Australian business news we hear daily reports about how the Chinese economy is performing. The performance of the Chinese economy is important to Australia because it affects Australia's export performance. Over a quarter of all Australian exports are currently sent to China. It is hoped that there will be continued demand for our exports in the future. Also, as incomes in China grow, there may be increasing demand for Australian food products, manufactured products requiring skilled creation and assembly, and services.

Australia's goods and services trade with China (A$ millions)

Description	2009	2010	2011	2012	2013
Total exports from Australia to China (A$ millions)	47 763	64 304	77 596	79 260	101 590
Total imports from China to Australia (A$ millions)	37 399	41 029	44 030	46 402	49 329

Source 1 The value of Australia's imports and exports with China, between 2009 and 2013

Source 2 China is now Australia's major trading partner. In 2013 we exported 28.1 per cent of our total exports to China and imported 14.5 per cent of our total imports from them.

skill**drill**

Reading and interpreting data tables

A table consists of rows of data that run horizontally and columns of data that run vertically. The first row and column of the table typically do not include any numerical information. Instead, they identify the names of what is being shown.

Being able to read and interpret a table of statistics provides the information we need to solve problems, investigate reasons why a problem has occurred, prove a point and strengthen an argument we are trying to make.

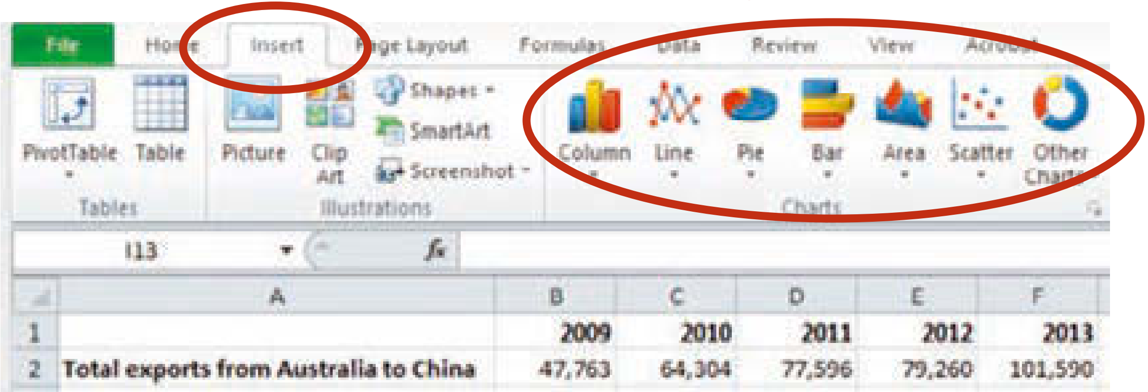
Step 1 Read the table heading to gain an overall idea of what the table is about. Then, read the names of the columns and rows that do not have numbers in them. The first row in Source 1 tells us that the data is annual data. The second row of column 1 tells us that the data contained in each square or cell is the value of total exports in millions of Australian dollars. Read across to the year 2009 and then down to the next row to see the value of total exports from Australia to China for that year (A$47 763 000 000, or over 47 billion!).

Step 2 Now try to make some observations about the data you see. As you read the value of exports for each year, try to observe whether there is a trend. Are the numbers generally increasing or decreasing or do they fluctuate? It's not enough to say that Australian exports to China have increased over the last five years to 2013. Has there been a gradual increase from one year to the next or has there been drastic growth in the value of exports to China? Are there any years that stand out as exceptionally good or poor? It may also help if you calculate the percentage change from one year to the next.

Step 3 Consider drawing a chart from the data so you can more easily see the trends. Copy the table into an Excel spreadsheet, select the table, click the 'Insert' tab and choose a chart.

Apply the skill

1 Interpret the table in Source 1 and describe the change in Australia's total exports to China in the five years to 2013. Provide an Excel chart with your description.



Choose chart

	2009	2010	2011	2012	2013
Total exports from Australia to China	47,763	64,304	77,596	79,260	101,590

Source 3 How to create a simple chart in Excel

Extend your understanding

1 Compare imports and exports in the year 2013. Did we export more goods and services to China than we imported from them?

2 Explain why the performance of the Chinese economy may affect Australia's export performance.

11.6 Gaining a competitive advantage

A **competitive advantage** gives a business the ability to outperform other similar businesses in a market. The business is able to better satisfy the consumer than other similar businesses and this may result in increased sales and profit. Profit is the revenue a business receives minus any expenses such as the cost of raw materials, the cost of labour (wage costs) and taxes.

Businesses that gain a competitive advantage have worked out how to best satisfy the consumer – the buyer of their good or service. There are several methods a business can use to gain a competitive edge.

Source 1 Some businesses strive to gain a competitive edge by creating something entirely new in the market. They stand out from the crowd because their business idea is unique. Nick D'Aloisio, an Australian-born entrepreneur, created an app called Summly from his London home when he was just 17. Summly summarises news for smartphones. The technology behind it was sold to Yahoo! for millions of dollars.

Offering the consumer a better price

Lower prices are an important way of enticing the consumer to buy goods and services. Some businesses are able to offer consumers lower prices because they find ways to reduce the cost of making a good or providing a service. New technology may be used to cut labour costs. Self-scan checkouts in supermarkets, for example, may reduce the need for employees to work on a checkout (see Source 2). Sourcing cheaper materials from suppliers may be another method of cutting production costs.

Source 2 Self-service checkouts such as this are one of the ways in which businesses can use technology to reduce their labour costs, in an attempt to offer consumers cheaper prices on the goods they sell.

Larger businesses have the advantage of lower costs of production because it is cheaper to produce larger volumes of goods or services than smaller volumes. This is referred to as economies of scale. The reason for this is that firms have fixed production costs such as equipment, advertising and marketing costs. Consider a cake manufacturer, who has the capacity to cook 10 000 cakes per day. The electricity costs of using ovens might be the same whether 8000 cakes or 10 000 cakes are produced so there is an advantage in producing more, rather than fewer, cakes.

Outsourcing part of their operations is another cost-cutting measure some businesses choose to use. This can mean that work that was once undertaken in Australia is now completed overseas at a reduced cost. Qantas, for example, has recently outsourced the heavy maintenance of two of its largest planes to a company in Hong Kong.

Cost cutting is one way of reducing the price of a good or services, but a business may also decide it is in their interests to lower prices, accepting lower profits in order to ensure continued sales, and ultimately the survival of their business.

Making the consumer aware of the product or service

In order to buy a particular product or service, the consumer must first be made aware that it exists. Advertising is one way a business can gain a competitive edge. Advertising involves drawing the public's attention to a product through various media such as websites, social networks, television, print material such as newspapers and magazines, or even product placements in film and television. **Blended marketing** is the combination of digital and traditional marketing and is said to be the key to reaching the most consumers.

Source 3 Next time you're browsing your favourite website or watching your favourite TV show, see if you can detect any product placement.

Offering consumers better quality or perceived quality

There are some goods and services that many consumers are willing to pay more for because of their quality. There are many different aspects of quality. David Garvin developed the concept of there being eight dimensions of quality.

1. Performance – how well does the product work?
2. Features – what additional features does the product have compared to similar products?
3. Reliability – can the product be tested to work without fail?
4. Conformance – does the product meet expected standards?
5. Durability – will the product last a reasonable amount of time?
6. Serviceability – how quickly and efficiently can the product be repaired if it does break down?
7. Aesthetics – does the product's look, feel, sound, taste or smell appeal to the consumer?
8. Perceived quality – does the consumer think the product is a quality product?

Showing corporate social responsibility

Strategies to improve brand reputation also include **corporate social responsibility (CSR)**. CSR requires a business to contribute positively to society, such as through environmental, economic or charitable initiatives. Some companies, such as The Body Shop and Thankyou, have made social responsibility a part of their business practice and branding. Their work with charities and sustainable practices has made them an appealing choice for consumers. CSR helps a business to increase its competitiveness in the following ways:

- It improves the reputation of the brand.
- Consumers are more willing to purchase goods and services from the business because it makes them feel good about themselves.
- It can save money on costs while being more socially responsible, for example, adopting environmentally-friendly practices to cut down energy consumption.

casestudy

Would you buy a bag for $5000?

What makes a customer buy a luxury handbag for nearly $5000 when they could buy a handbag for less than $50? Some say you pay for quality and craftsmanship. But is a well-made quality handbag that costs close to $5000 really worth it?

For some customers, the worth may be in a combination of beautiful craftsmanship, the aesthetics (how the leather feels, looks and smells) and the bag's features – whether it is versatile, allowing the customer to remove the straps and carry it in different ways, for example.

However, there may be something else that the customer is buying when they buy such a handbag – perceived value. This is intangible and cannot be measured. It may be about how that product makes them feel and how they are viewed by others when they use it. According to Uché Okonkwo, a management consultant specialising in the luxury sector, 'Luxury is neither a product, an object, a service, nor is it a concept or a lifestyle. It is an identity, a philosophy and a culture'.

LOUIS VUITTON

Source 4 Louis Vuitton is an example of one of the world's biggest luxury brands. The company sells a range of luxury products, such as handbags, luggage, small leather goods, shoes, stationery, timepieces and jewellery.

Creating a brand helps the consumer to quickly identify who made the product and sets the product apart from similar products sold by others. Advertising and marketing can therefore have a dramatic effect on whether a company gains a competitive advantage. Examples of well-known global brands include Apple, Google, IBM, Microsoft, General Electric and McDonald's. Source 5 lists the top seven luxury brands. Do you recognise any of them?

Rank in top 100 brands	Brand Name	Brand Value ($m)
17	Louis Vuitton	24 893
38	Gucci	10 151
54	Hermès	7 616
60	Cartier	6 897
72	Prada	5 570
75	Tiffany & Co.	5 440
77	Burberry	5 189

Source 5 Most valuable luxury brands in 2013, according to Interbrand's top 100 brands

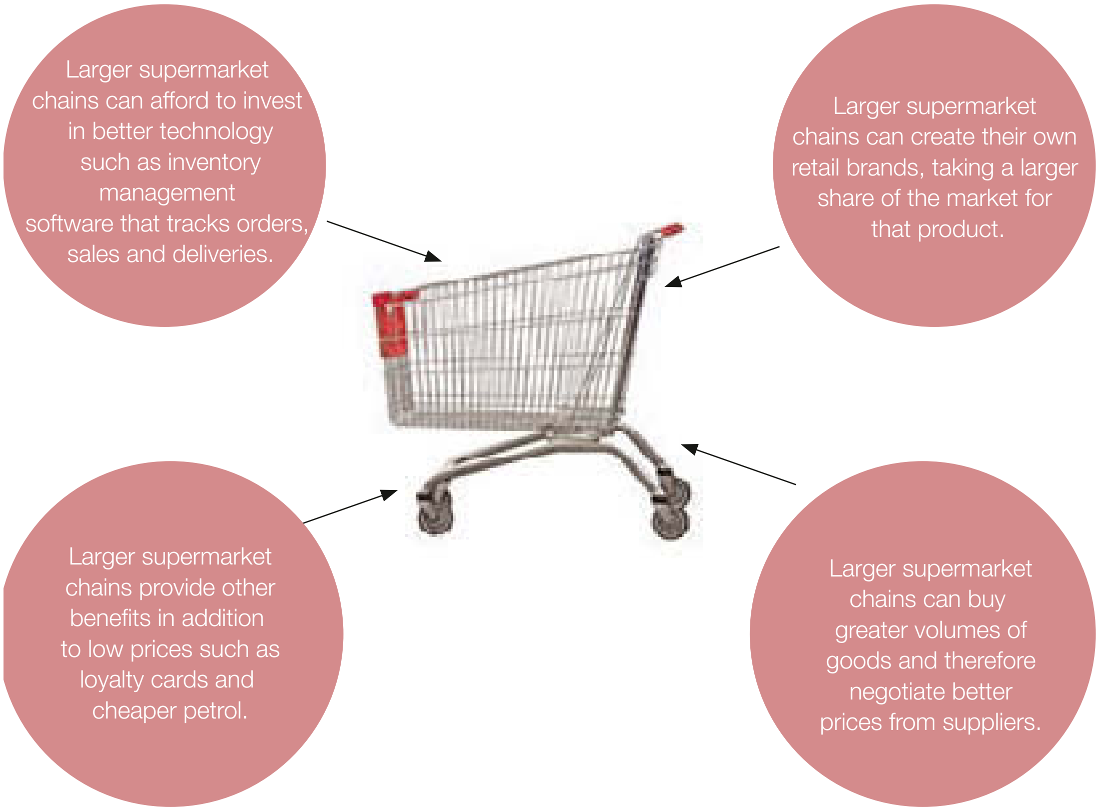
Being more responsive to consumer needs

Being responsive to consumer needs may be as simple as bringing products to market 'on time'. The motor mechanic that is known for their quality work will soon grow out of favour if the customer has to wait an unreasonable amount of time for their car to be repaired.

Responding to consumer needs also means treating the customer well. Helping the customer when and if they need help is called customer service. Depending on the product, many customers need staff that have product knowledge. After-sales service is also important.

Businesses can improve their customer service by ensuring staff are properly trained. Technology may also assist a business to deliver faster, more efficient customer service. For example, airports that provide customers with self-check-in facilities minimise delays.

Responding to consumer needs is not just about customer service and fast delivery. Businesses who produce new products in response to consumer needs, such as Nick D'Aloisio did, also gain a competitive edge. Many consumers also demand that ethical business practices are used in the production of goods and services. Ethics are standards that provide us with a guide to what is right and wrong. Goods or services produced without harming humans, animals or the environment are considered favourable by many consumers today.



Larger supermarket chains can afford to invest in better technology such as inventory management software that tracks orders, sales and deliveries.

Larger supermarket chains can create their own retail brands, taking a larger share of the market for that product.

Larger supermarket chains provide other benefits in addition to low prices such as loyalty cards and cheaper petrol.

Larger supermarket chains can buy greater volumes of goods and therefore negotiate better prices from suppliers.

Source 6 Supermarkets use many methods to gain a competitive advantage. In Australia, the two largest supermarket chains are Coles and Woolworths. These supermarkets combined take up 71 per cent of the national food market share in Australia.

Check your learning 11.6

Remember and understand

1 What is the main advantage of a business obtaining a competitive advantage?

2 List five ways a business might reduce their production costs in order to obtain a competitive edge.

3 What is the difference between quality and perceived quality?

Apply and analyse

4 Each of the eight dimensions of quality consist of a question. Answer each question in relation to a product you were given for your birthday or at Christmas.

5 Why is a brand so important when it comes to selling luxury goods?

6 Consider the goods you buy. Explain why you buy these goods. Do you think it is because they are considered to be ‘cool’?

7 Why is blended marketing believed to be the best way to advertise a product or service? Do you agree?

Evaluate and create

8 Select a food product and have five people undertake a blind taste test. Choose at least three different brands of the same food and ask five blindfolded testers to rate each from one to three, with one being the best rating.

  a What was the most expensive product out of the three and what rating did the taste testers give it?

  b What have you learned from this experiment about the power of brands?

9 Describe when you were last given poor customer service in a store and how the business could improve in this area.

10 Look in your pantry, laundry or bathroom cupboard and list any products that claim their product is superior because of the ethical way it was produced. For example, the label claims the product is environmentally friendly. Do you think these claims are true? Why or why not?

11.7 Innovation in business

Innovation is changing an existing process or product so that it is more effective than ever before. It is important to understand that innovation can be used in many parts of a business to create a competitive edge. Let's first look at how innovative ways to market a product can lead to business success.

Innovation in marketing

A company's marketing methods can influence a consumer's decision to buy a product. Marketing is conveying the value of goods or services to a customer in order to sell that product to them. Marketers today realise that they will be more successful if they produce goods and services consumers want. They do extensive

casestudy

How do marketers reach young people?

Marketers now have to communicate with consumers in the digital world to ensure they continue to influence buying decisions. This means communicating via websites, email, apps and social networks. Recent statistics found that both teenage boys and girls spend 2.5 hours a day using the internet, so businesses that wish to connect to a younger audience of consumers need to have online marketing strategies.

In 2011, Coca-Cola Australia embarked on an innovative marketing campaign to increase sales, particularly among younger adults. The 'Share a Coke' campaign used both traditional and online marketing to get their message across. Sales increased by 7 per cent after the campaign. The company printed 150 of the most popular Australian names on Coke bottles, inviting consumers to share a Coke with a friend. Consumers could go online and create a personalised virtual Coke can and even SMS one of their friends' names, which would then display on a huge Coca-Cola billboard at Kings Cross in Sydney. The campaign succeeded in creating awareness among younger users and gaining media attention, and was rolled out successfully in other countries, including the United Kingdom in 2013–14.

Share a 'Coke' with
name here
Interactive Billboard
Custom Can Kiosks
Voting stage
Earned media
Andrew
Luke
Steve
Mel
Ste
Bori
Challenge
Idea
Results
Coca-Cola

Source 1 Coca-Cola's 'Share a Coke' campaign research to find out what consumers want and set about creating goods or services that meet consumer needs better than other competitors in the same market.

Marketers use different techniques to influence consumers to buy their products. Not all consumers have the same needs and wants, so marketers set about dividing the market into groups or subsets of consumers who have common needs and characteristics. This is called market **segmentation** (see Source 2). For example, all consumers eat, but what and how we eat is affected by our culture, and perhaps religion. To illustrate, McDonald's does not sell beef and pork products in their Indian restaurants because of Hindu and Muslim beliefs.

Segmentation is used so that consumers with common characteristics can be pursued or targeted to purchase the product. For example, older people are usually targeted to buy funeral **insurance** so that in the event of their death the person's family is paid a lump sum to cover funeral expenses.

A technique called **positioning** is also used by marketers. This technique aims to create a distinct image for the product that differentiates it from other similar products on the market. The benefits of the product are communicated to the consumer as well as how unique that product is. For example, chocolate-covered popcorn called 'chocorn' has managed to gain consumer attention among other snack foods because consumers see it as a new and distinct product.

A consumer's buying habits may be influenced by the following:

Geographical market segment	Where the consumer comes from, for example their nation, state or region
Demographic market segment	The age of the consumer, gender, amount of income, ethnicity and religion
Behavioural market segment	Includes the level of knowledge the consumer has of the product or whether the consumer uses the product regularly
Lifestyle segment	Includes the consumers' attitudes and opinions or the way they spend their leisure time

Source 2 Marketers may target their product or service at a particular segment of the market.

Innovation in business culture

Each business will have its own particular way of conducting business. The 'culture' of each business is influenced by factors such as values, beliefs, the vision for the business and habits. If an organisation is considered to be a good place to work, labour productivity (the amount of goods and services that a worker produces in a given amount of time) is likely to be higher.

Businesses that have an innovative business culture take active steps to ensure creativity is encouraged within their business. A business may, for example, have employees undertake training to help foster creativity and innovative thinking. Innovation may be specifically stated as a business goal, and time and resources may be devoted to help staff develop great ideas. Amantha Imber, the founder of Inventium (an innovation consultancy firm) says, 'If you do not innovate, you risk becoming irrelevant because so many other companies are innovating and looking to stamp out their competition. We're seeing it becoming a priority for more and more CEOs.'

Innovation can be applied to how a business operates. John Lewis (see case study on page 392) is a UK company that has a different way of conducting business, which has contributed to its business success.

Source 3 Garth Midgley came up with his chocorn idea when he accidentally mixed his chocolate icecream with popcorn at the movies.

casestudy

Would you like to work for this business?

Imagine working for a business that divides a percentage of its annual profit among the people who work in the business. At John Lewis, a chain of upmarket department stores in the UK, this is exactly what happens. The 91 000 employees (who are referred to as 'partners' rather than 'employees') each own a share of the 31 John Lewis department stores and 319 Waitrose supermarkets in the United Kingdom.

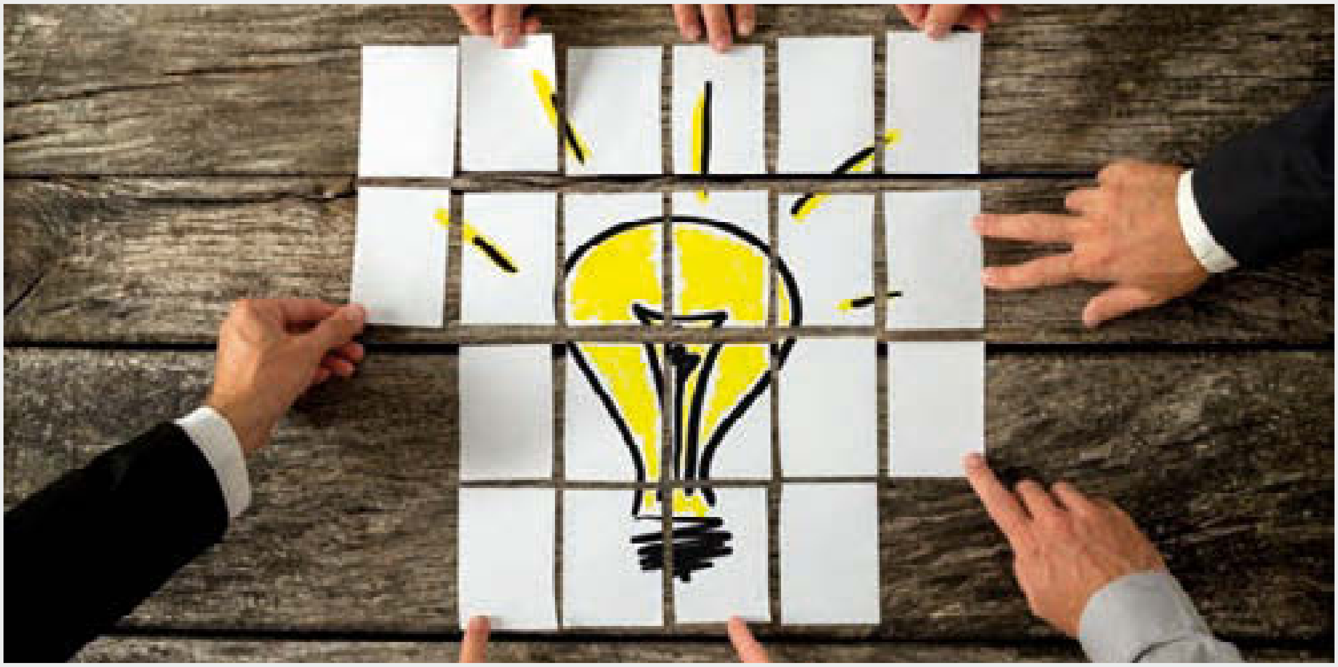
Source 4 Employees or 'partners' at John Lewis find out about their annual bonus, which is linked to the business' performance.

All workers, from top management to cashiers, receive the same percentage cash bonus each year, provided that the company makes a profit. In 2013 this amounted to 15 per cent of each worker's annual pay; an amount roughly equivalent to eight weeks' wages.

The radical idea to give employees a share of the profits came from John Spedan Lewis (1885–1963) who began distributing profits to employees in his stores in 1926. The John Lewis department stores and Waitrose supermarkets have been a financial success, with both increasing their share of the market for the fifth consecutive year. The chairman of John Lewis, Charlie Mayfield, believes that ownership by the partners plays a key role in the businesses success.

Employee ownership is popular in the United States, Britain and Europe but is yet to catch on in Australia. Research suggests that there are significant productivity gains to be made through employees owning a share in the business they work for.

John Lewis' business success cannot only be attributed to its profit share policy. The company has been leading the charge in online retailing and actively uses technology to appeal to its customers. In-house staff have just produced an app which shows a sofa in 3D, where the shape and colour of the fabric can be changed to give the customer a more informed choice.



Source 5 Innovative ideas can sometimes occur when many people work together on a project.

Innovation in business processes

All businesses use a number of processes to create a product (either a good or service). A process is a series of tasks or actions. **Business processes** must be efficient or productivity will decline. If you have ever waited a long time for a meal in a restaurant, it may have been because the process of ordering a meal could have been more efficient (see Source 6). To use another example, if a shop regularly runs out of a product, it may be because the process of keeping track of its stock is inefficient. Computerised stock systems can help a business control stock. Some manufacturing businesses use just-in-time inventory systems so that materials arrive at the right time without the need to hold vast amounts of stock, thus reducing storage costs and the possibility of waste or damage to stock.

Source 6 Tired of seeking the attention of waiting staff himself in restaurants, restaurateur Noel Hunwick came up with the idea of an interactive table. The customer chooses from the menu by tapping the touchpad on the table and the order is sent straight to the kitchen.

Check your learning 11.7

Remember and understand

1 What is innovation?

2 Why is the UK business John Lewis considered to be an innovative company?

3 Why would marketers use different techniques to influence the buying choices of consumers?

4 Describe two marketing techniques commonly used to influence consumers.

Apply and analyse

5 In order to make a product or service more effective, it is useful to think about the problems that might be experienced using it. For example, one of the problems with buying a fresh lettuce is that it has to be washed. Many supermarkets now supply washed lettuce for consumer convenience. Think of at least three products or services that you use that have been improved or could be improved.

6 What particular market segment or segments would the following products likely appeal to:

- a shaving cream
- b hairspray
- c walking frame
- d Nike runners
- e outdoor heater.

7 Think of two products you have purchased and explain how these products have been specifically marketed to consumers in your age group.

8 How did Coca-Cola manage to increase sales through the ‘Share a Coke’ campaign?

Evaluate and create

9 Read the following cases and give each business owner some ideas on how to be more effective in their business.

- a Maree owns a bakery but has noticed that the bakery at the end of the street is much busier than she is. Maree has been making the same cakes since she started the business three years ago and has not changed anything about the shop.
- b Lee runs an online rubber stamp business. Businesses can order a custom-made business stamp and ink pads. Lee analyses the number of customers to his website and realises that his business is just not being seen. He set up a business to get customer feedback and one customer said she had trouble visualising what the stamp looked like, so wouldn’t buy it.
- c Kyla has an online gift shop. She prides herself on having the greatest range of gifts for the home but her competitors are more popular. Customers find it difficult to find what they want and the photography is very unappealing.

11C rich task

The importance of innovation in business

Innovation can be the key to business success. Take the Rubik's Cube, for example, invented by sculptor and professor of architecture Ernö Rubik in 1974. We had all seen puzzles before, but not a 3D combination puzzle that was so entertaining it became the best-selling puzzle game in the world.

Innovation isn't always about the creation of novel (i.e. new and original) products such as the Rubik's Cube, though. Innovation can be used in all businesses to add value to existing products and services. For example, we all need and are familiar with shoes, but normally we buy them ready-made in a shop or online. One Australian business called Shoes of Prey is changing the way we think about shoes, as customers can design their own shoes, choosing the shape, colour and height of their shoes, which are then custom-made and delivered.

Source 1 The Rubik's Cube is an example of a novel innovation that has enjoyed huge commercial success.

Product or service innovation can give a business a competitive edge. One of the keys to innovation, though, is realising that change is necessary. Change in technology has meant that businesses must change the way they produce their product or service, or be left behind. One **small business** operating a 1950s clothes shop in the historic country town of Braidwood in NSW understands the importance of innovation. The co-owner of the business, Michelle Watkins-Sully, knew the business could not survive on local custom alone, so set up an online store to capture customers further afield. The business has also used social media to build a strong customer base.

Innovative products or services that allow other businesses to reduce labour costs, reduce materials needed to make a product, or reduce environmental damage are much sought after. Japanese scientists have just unveiled their first robotic newsreader that has perfect language skills and can read the evening news (see Source 2).

Source 2 The world's first robotic newsreader was unveiled in Tokyo in 2014.

skill**drill**

Being innovative in business

You may not have ever thought about innovation as a skill before, but like many aspects of business, it is something that can be learned, practised and improved upon. A business that strives to add value to their product or service and changes according to consumer demand is more likely to stay in business and remain competitive. Businesses now compete in a global market and the emphasis is not only to produce good products but to produce them in a cost-effective way.

Roger La Salle is an innovation expert and has developed a 'four seeds' approach to product innovation. This approach provides a structure that can be followed to help a business find innovative ways to improve their business, whether it is creating a new product, improving an existing service, streamlining work processes or simply finding new business opportunities.

Follow these steps to use the 'four seeds' approach to business innovation:

Step 1 Change the product or service. How can the product be changed for the better? (Seed 1)

Step 2 Add accessories. It's not just the product that is important, it is the accessories, such as the iPad cover or the mobile phone holder, that can add value to a business. (Seed 2)

Step 3 Add complementary products. When a business is selling a product such as a hamburger, fries and drinks that might go along with it are offered for purchase as well. (Seed 3)

Step 4 Enhance the sales channels. A sales channel is a business' access to a customer. You might have heard a salesperson ask you whether there is anything else they can do for you. Coles is an example of a business that has used their relationship with customers to sell other products, such as insurance, in addition to their main business of selling groceries. (Seed 4)

Apply the skill

Practise your innovation skills by devising a new way to produce each product or service outlined in the table on the following page (first column).

The following task focuses on Seed 1 from La Salle's 'four seeds' approach that relates to changing a product or service. Here are just some of La Salle's suggestions to get innovative ideas flowing.

1 **Make a wish for the product.** For example, if you take a simple product, such as a pen, you may wish it did the writing for you if you told it what to do. Make a wish for each product or service listed in the first column and put your answer in each row of column 2 of the table. The first answer has been done for you.

2 **Think about the life cycle of the product or service.** For example, if we use the example of a pen again, it might only last a month depending on how much you write. State the life cycle of each product or service in column 1 and put your answer in column 3 of the table.

3 **Analyse the problem with the product currently.** For example, pens are never there when you need them! State the problem with each product or service in column 1 and put your answer in column 4.

4 **Review your answers for each of the products or services in the table.** State (a) what your innovative idea is and (b) whether your idea would have commercial success. Put your answer in the last column.

Source 3 on the next page will help you practise your innovation skills. See the sample answer to the first product (tablecloth) as an example.

5 If you have a great idea, this becomes your intellectual property (IP). You can legally protect this idea from being taken by others. Access your obook link and go to the IP Australia website and use the interactive called 'IP in everyday life'. List the products or services you have used today and tick the ones you think have protected intellectual property.

The product or service to change	A wish for the product	The life cycle of the product or service	The problem with the product currently	Innovation (a) What is your idea? (b) Do you think it would have commercial success? Why/Why not?
Tablecloth	It's always clean, you can design your own tablecloth and change the colour.	It becomes stained and only lasts a year or so.	Requires constant laundering. You can't find one to suit your decor and are tired of the colour.	(a) Design a table for restaurants that consists of a table that has a self-cleaning tablecloth. (b) Further research and development required.
Mobile phone				
Can of drink				
Chair				
Calculator				
Getting a haircut				
Going out to dinner				

Source 3 This table can help you practise your innovation skills.

Extend your understanding

1 Choose two of the following Australian innovations and conduct some research on the Internet to find out more about them.

Australian innovations:

- fire-stick farming
- Granny Smith apples
- Pink Lady apples
- Vegemite
- pre-paid postage
- School of the Air
- Clean Up Australia (and the world)
- Earth Hour
- Speedos
- Sydney Opera House
- Caroma dual-flush toilet
- Solar Sailor
- wave-piercing catamaran.

2 For each innovation, explain:

a why this product or service was innovative

b how it has been successful

c who led the innovation and when did they do it.

EARTH HOUR
minutes
60
minutes
EARTH HOUR

Source 4 Vegemite, Earth Hour, Pink Lady apples and the Sydney Opera House are just a few Australian innovations.

Australia and the global economy

Managing financial risks and rewards

This man is practising an extreme balancing sport known as highlining. Managing your finances can be like walking on a tightrope – both exciting and risky at the same time.

Sometimes, we can **spend** or borrow too much money or make risky investment decisions in the hope that we will secure our financial future. Other times, we can be tricked by scammers who set traps to steal our money or encourage us to invest in bad **business** opportunities.

Thankfully, people can protect themselves from financial **risk**. Knowing how to save and invest properly can provide financial rewards that will keep you balanced and safe on that tightrope. Knowledge of scammers who try to throw you off balance can also protect you from a financial fall.

12A

How can I save more and spend less?

1 Do you save more money than you spend, or is it often the other way around? Are your family and friends like you? Why do you think people are different in this way?

2 If you bought a car, would you expect to eventually sell it at a higher price? Why or why not? What factors do you think might affect the sale price?

12B

What strategies can be used to increase financial rewards?

1 Some people lose money on their investments. Would you be willing to trade greater risk for the chance of higher returns on your investment?

2 Why do you think people invest in real estate? What risks could be associated with buying property as an investment?

chapter 12

Source 1 Managing your finances can be a challenging balancing act.

12C

How can individuals safeguard against financial risk?

1 Have you, or someone you know, ever lost money because of a financial scam?

2 What things can you do to protect yourself against not having enough money in the future?

12.1 Saving

Put simply, **saving** means putting money aside to spend at a later date. Some of us are better savers than others. Compete the quick quiz (Source 1) to find out if you have what it takes to be a good saver.

Quick quiz: Are you a good saver?	Yes (✓)	No (✗)
1 Have you ever saved to buy something you really wanted but couldn't afford straight away?		
2 Before you spend money on something, do you ask yourself whether you really need it or not?		
3 Have you thought about doing extra work, such as babysitting, walking dogs, or delivering papers, to earn some extra cash?		
4 Have you considered ways your family could save money on things such as energy bills, food or clothing?		

Source 1 Answer these questions to find out if you are a good saver.

If you answered 'yes' to any of these questions, chances are you already know something about saving and are a reasonably good saver.

There are two simple ways to increase the amount of money you can save:

1. Earn more – you may have a casual job, so it is likely you will be able to save some of the money you earn, even if it is just a small amount. You could also earn more through **investing** your money (see page 64).
2. Spend less – give yourself a 'financial check-up' by monitoring what you spend your money on. Identify areas where you might be wasting money and hold off buying items you can easily live without.

case**study**

Is it really a bargain?

If you love going to sales, those bargains paid for by credit card might be quite expensive, especially if you cannot quickly pay your credit **debt**. Recent Reserve Bank figures show that Australians owed $51.07 billion on credit cards. Credit card holders are wise to pay the balance on their credit card each month to avoid paying interest. It's advisable to reduce spending if monthly repayments cannot be made.

Even if you pay the minimum monthly credit card repayment you will most likely be paying a considerable amount in **interest**. The MoneySmart website has a credit card calculator that allows you to calculate how much interest you would pay if you only pay the minimum monthly repayments. Based on an 18-per-cent **interest rate** it would take 33 years to pay a $5000 credit card debt off. The interest you would repay on this debt would be $12 181.

Financial commentator Paul Clitheroe comments that getting into debt is more about spending too much. He says, 'I often encounter the view that money problems would be solved if we earned a bigger income. Experience has taught me this isn't always a magic cure. We have a tendency to increase spending as our income rises.'

Source 2 Getting into debt can become hard to beat. It's like a cat chasing its tail, running around in circles and never quite getting anywhere.

Source 3 Many people save in case of an emergency. Having money ready in case of an emergency for car repairs, medical expenses or the prospect of losing a job can ease the burden. Other reasons for saving include education, holidays, large purchases such as a family home, or retirement.

case**study**

Where is the best place to keep my life savings?

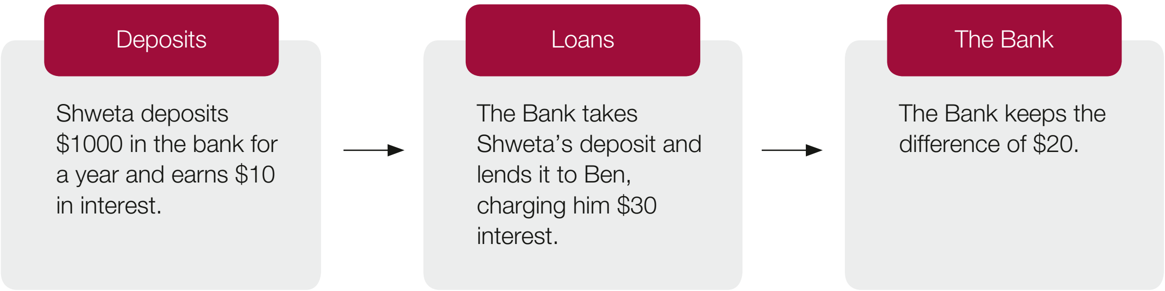
Some people keep their savings at home in what they consider to be a safe place – perhaps under the mattress or even buried in the backyard. One Californian couple recently reaped the rewards of this practice when they came across some rusty cans containing gold coins worth 10 million dollars. The cans were buried under an old tree on their property.

Those who keep their money at home, however, risk losing it. A Chinese couple recently found their four year-old son had ripped up their savings for a house **deposit**. Their little boy was regularly in the habit of ripping up books – a habit they thought was harmless until he destroyed the paper money that was their life savings.

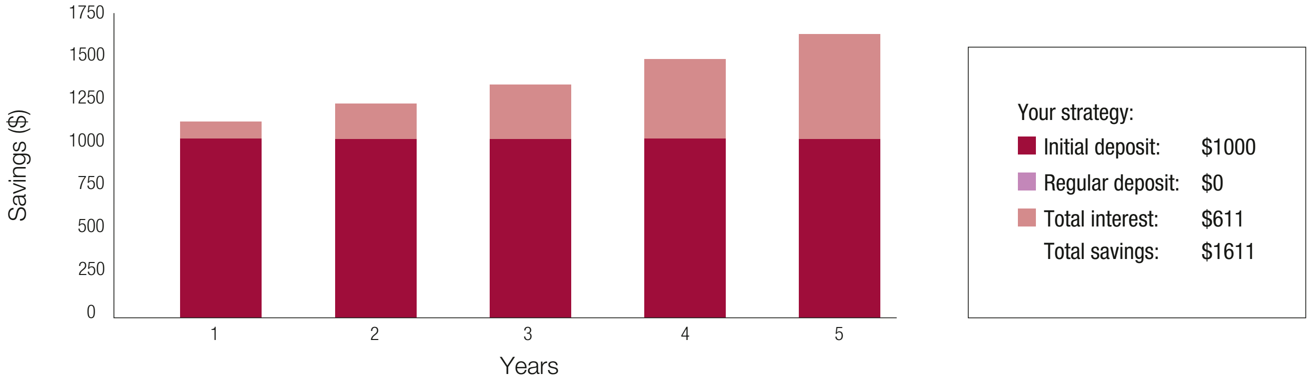
In another alarming incident in Tel Aviv, Israel, a daughter surprised her mother with a new mattress, only to find out her mother's life savings was hidden in the old one she had thrown away!

It's not advisable to keep savings at home for another reason – it will be earning no interest. Money kept at home will also lose value over time because of rising prices. For example, the same basket of items valued at $4000 in 2009 would have cost $4612.58 in 2015, because prices on average rose by 2.6 per cent **per annum** over this period. Theft or fire could also destroy savings kept at home.

Source 4 A couple in California found rusty cans buried in their backyard that contained gold coins worth millions of dollars.


Deposits
Shweta deposits $1000 in the bank for a year and earns $10 in interest.
Loans
The Bank takes Shweta's deposit and lends it to Ben, charging him $30 interest.
The Bank
The Bank keeps the difference of $20.

Source 5 Banks, credit unions and building societies make money from taking deposits and then loaning these deposits and charging interest.



Source 6 This diagram was created using the compound interest calculator on the MoneySmart website. A five-year investment of $1000 using compound interest will earn an extra $611.

Setting savings goals

Saving regularly can be easier if you set a savings goal. This is how to go about it:

1. Identify what you would really like to have in the future and how much it will cost.
2. Identify the amount of money you can put aside per week or month.
3. Identify how long it will take you to reach your goal.

For example, if your goal is to go on a holiday costing $2000 and you can save $100 per month, it will take you one year and eight months to reach your saving goal.

Earning interest

Saving is not enough on its own. When we put aside money for future use, we must decide where we are going to put it so that it earns additional money. This is called investing. Putting money in the bank, for example, will most likely mean the bank will pay an additional sum of money, called interest. The amount of interest you earn depends on the amount deposited, how long the deposit is left in the bank, the current interest rate and what type of interest is being paid.

Interest is often calculated per annum, or year. This is how to calculate **simple interest**:

- Take the amount deposited (called the **principal**), multiply by the interest rate, then multiply by the length of time (e.g. number of years).
- For example, if you deposit $1000 in an account at 10 per cent for two years it would be worth $1200.

Compound interest is interest added to the principal. This amount is then used to calculate interest. For example, if compound interest is calculated on a deposit of $1000 for two years at 10 per cent, $100 interest would be earned in the first year. Then, in the second year, the interest rate would be calculated on $1100, giving a total of $1210. Source 6 shows the compounding interest over a five-year period using the MoneySmart website compounding interest calculator. Which would you rather – simple or compound interest?

Good and bad debt

Sometimes it is not possible or convenient to wait until savings grow. Debt occurs when money is owed to another party (the lender) and must be paid back (by the borrower) within a certain timeframe with interest. Generally, debt can be considered to be 'good debt' if the money borrowed is used to purchase something that will provide income or increase in value. For example, a loan to pay for university tuition fees might generally be considered 'good debt' as it increases a person's ability to secure a job and earn a higher income. A loan taken to purchase a house could also be 'good debt' if the value of the **property** increases over time.

Debt is usually considered to be 'bad' if it is used to purchase something that will decrease in value over time and/or will not earn an income. A car loan may be considered to be 'bad debt' as a car is likely to lose value (depreciate) over time.

Before taking out any loan, careful consideration must be given to whether the borrower has the ability to comfortably make future repayments.

Check your learning 12.1

Remember and understand

1 Draw a flow diagram illustrating how a savings goal is set.
2 What are the two ways of increasing money available for saving?
3 You deposit $5000 in the bank at an interest rate of 10 per cent per annum for two years. Calculate the:
   a simple interest
   b compound interest.
4 What determines the amount of interest earned from a bank deposit?
5 List at least four reasons people might want to save money.

Apply and analyse

6 Why do you think some people keep their savings hidden at home?
7 Explain how keeping large amounts of savings at home may in fact reduce what can be purchased with that money in the future.

Source 7 Some people are able to spend less and save more when they don't have a credit card.

Evaluate and create

8 Brainstorm ways you and your family could save money using the following table as a guide. Some ideas have been added to help you get started.

Transport	Food	Clothes	Entertainment	Credit cards	Phone
Walk to school	Shop at discount supermarket	Visit the opportunity shop	Go to the beach	Pay the credit card off each month	Check your mobile phone plan to see whether you are getting the best deal

9 Go to the MoneySmart website and read about the simple ways to save money. Decide which of these suggestions may be helpful for you and your family, and add them to your table.
10 What do the following sayings mean? Write a short paragraph on each, explaining whether you think the saying is relevant to you and your spending habits.
   a 'A penny saved is a penny earned.'
   b 'Beware of little expenses. A small leak will sink a great ship.'
11 Identify an item you would like to buy, such as a new phone, and explain why it might it be better to save up for it rather than just borrowing the money to purchase it immediately.

12A rich task

Am I spending too much?

Reducing your spending is one simple way to increase your savings. Australians are a nation of spenders and our credit card debt is growing. The average debt per credit card holder in Australia is around $3200.

Many people end up paying large amounts of interest on borrowed money. **Borrowing** money is convenient but it must be managed so that regular repayments can be made even when interest rates rise.

We all need to spend to ensure we have basic items such as food, clothing and shelter but we are probably all guilty of spending more than we really need to at times. When you are next shopping, ask yourself whether you really need – or just want – the items you are thinking of buying. Here are reasons some people spend:

1 **Marketing and advertising –** Clever marketing convinces us we need a range of different items.

2 **Keeping up with the Joneses –** It's human nature to want to have what others have.

3 **Social power and prestige –** Cars, clothes, holidays and houses can all contribute to our social and economic status in society.

4 **Credit availability –** Some people buy more because they have access to credit and don't think about the fact they will have to pay later (often with interest).

5 **Impulse buying –** Some people see something they love and make a quick purchase without really thinking about whether they can afford it.

6 **The pursuit of happiness –** Some people think that the more they buy, the happier they will be.

skill**drill**

Conducting a survey and presenting the results

We use surveys to explore people's opinions, ideas and activities. By analysing the results, we can gain valuable insights into personal and social behaviour. The key to finding useful information from a survey is asking the right questions.

Try to ask closed questions (yes/no questions or questions that provide a limited selection of options to choose from) as much as possible. Closed questions in surveys are commonly multiple-choice and ask people to choose their reply from a set of answers that you provide. Open questions (questions that don't give options to select from but encourages an individual's own thoughts to be expressed) are sometimes important too, but because you may receive a huge range of replies you may not be able to use the data so easily.

Follow these steps to design a survey and present the results.

Step 1 Decide on the focus of your study.

Step 2 When you have decided what your study will be about, work out what information you are interested in finding out. For example, your study might be about internet shopping, and you may want information on how often people shop online.

Step 3 Decide what people you will survey. You will need to talk to at least 10 people to get data you can report on. Make sure that you have enough forms for all of the people you intend to survey. The more people you survey, the more useful and reliable your results will be.

Step 4 Write a series of closed questions about your study. A closed question might look like this:

How often do you use the internet at home for shopping?

At least once a day ____

At least once a week ____

At least once a month ____

No Internet at home ____

Step 5 Once you have your questions written, go over them to ensure that they are all focused on the subject of your study and are geared to find out the information you want. Make sure they are clearly worded and cannot be misinterpreted by people completing the survey. Ask a friend to read over your questions if you are uncertain.

Step 6 Conduct your survey. Ask the questions and fill in the forms yourself, or you can get your participants to fill them in. Make sure the responses have been entered correctly and that you have accurate records.

Step 7 Once you have completed your surveys, it is time to put the results together into a form you can use – this is called data analysis. This is often best done in a table such as the one shown in Source 1.

How often do use the Internet at home for shopping?	Number	Percentage (%)
At least once a day	14	58.3
At least once a week	7	29.1
At least once a month	1	4.2
No Internet at home	2	8.4
Total	24	100

Source 1 Data can be presented in a visual format such as a table so the researcher can access information quickly and easily.

Step 8 Present your survey results in a way that make them easy to understand. Rather than a lot of numbers and writing, use graphs. Make sure you clearly label each graph with the question you asked. Below each graph write a short summary of the results.

Apply the skill

1 Design and complete a survey about the ways in which people in your class and members of your family shop on the Internet. Include a minimum of 10 questions. Survey a minimum of five classmates and five family members (or other people you know outside of class). You might want to include questions such as:

Do you shop online?

Yes ________

No ________

If yes, how many hours a week would you spend browsing online stores?

0–2 hours ________

2–6 hours ________

6–10 hours ________

10 hours or more ________

2 Once you have completed the survey, analyse the results and present them in table and graph formats.

Source 2 Reserve Bank figures released in 2015 showed that Australians owed $51.07 billion on credit cards compared to $49.9 billion at the same time the previous year.

Extend your understanding

1 Compare your findings with those of a classmate. Write a report based on both sets of results, explaining how often and in what ways people used the internet for shopping purposes.

2 Present the results of your study to the class. Use your table or graph from the previous question as a visual aid, and talk through the most popular websites that people used, as well as the differences or similarities between the ways your family members and classmates used the Internet.

12.2 Investing

Investing is the process of putting money into a business or commercial venture (such as property or **shares**) with the expectation of making a profit. Put simply, investing is a way of making your money work for you. Investing can be a good way to help you increase your personal financial rewards.

Setting personal investment goals

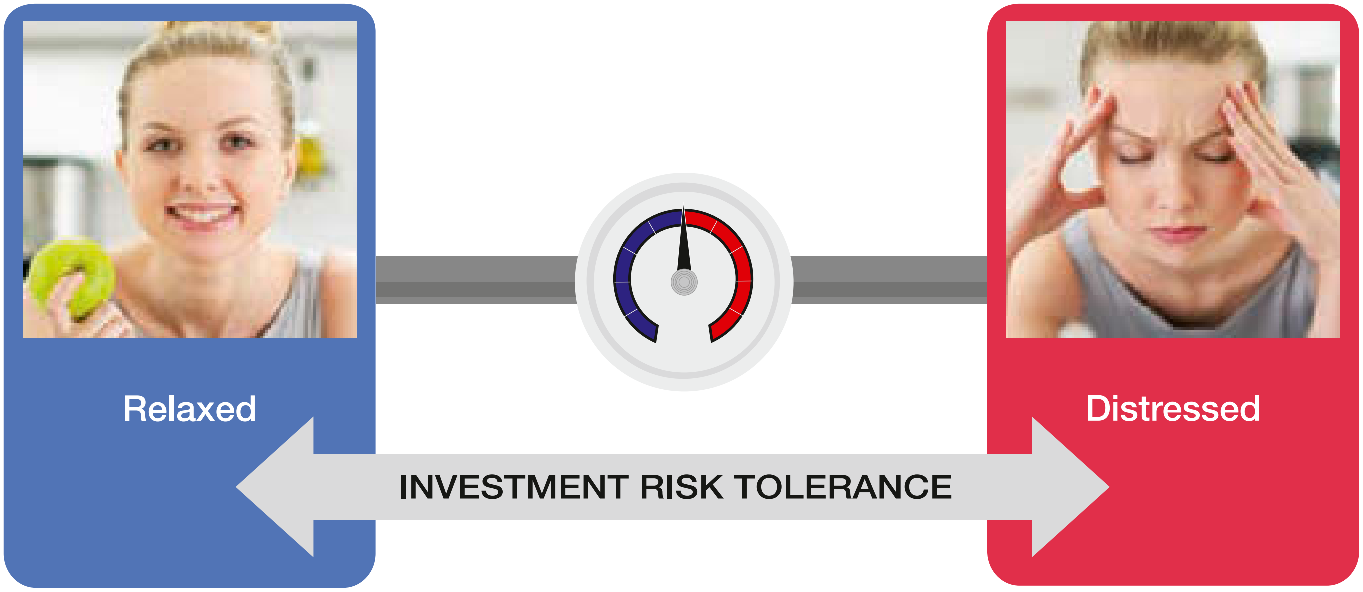
Thinking ahead is essential when setting personal goals such as buying a car or house, or saving for retirement. You need to think about the things you would like to purchase in the future and when you would like to make these purchases.

Assessing your risk profile

Investing money means taking a risk. Taking an **investment risk** means there is a possibility of losing money. Some investments are riskier than others. Putting your money in an Australian deposit-taking institution such as a bank is generally considered low risk. Investing in the **sharemarket** or in property is considered to carry a higher risk. Higher investment risks often come with the potential to earn higher rewards, but there is also the risk for higher losses.

Short-term goal
(0–3 years)
'I want to go on a holiday to Europe'
Medium-term goal
(3–7 years)
'I want to buy my own place to live'
Long-term goal
(7+ years)
'I need to start saving for retirement'

Source 1 Investing can help to achieve personal goals.


Relaxed
Distressed
INVESTMENT RISK TOLERANCE

Source 2 Some of us are bigger risk takers than others. If a high-risk investment is causing a person to worry and lose sleep, a lower-risk investment is advisable.

Each individual has to decide the level of financial risk they are willing to take (see Source 2).

Another factor when considering risk is the timeframe of your personal investment goal. If you have 25 years to wait for your investment return, you may decide to take a higher risk, understanding that there may be some short-term losses. However, over a more substantial timeframe, your investment is expected to grow. For example, the price of a property may have fallen in the short-term, but over a longer period the price may increase as the property market improves.

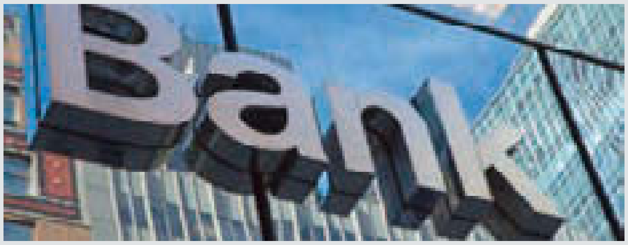
Investment options

Source 3 outlines the many investment options available. Investors should consider how volatile, or subject to change, the investment is likely to be. They should also consider the likely money that can be made from the investment – sometimes called 'return on investment'. Investors should also consider how readily they need access to their money. For example, money in the bank can be converted to cash more quickly than money invested in a property, which may take months to sell.

Many people would prefer that decisions about investments are made by a professional, and some may choose to invest in a managed fund. Money from investors is pooled together and an investment manager decides where the money will be invested. This provides the investor with the opportunity to invest in a wider variety of options, such as **equities**, property and **fixed-interest** investments. Managed funds help spread the financial risk – the loss suffered from one poor investment may be countered by other investments in the fund that have performed well.

There is much to gain and much to lose when investing money. Many people enlist the services of a **financial planner** to help them establish and achieve their investment goals.

Interest-earning investments



There are many types of interest-earning investments. Term deposits are a common form of interest-earning investment where money is invested for a fixed term at a fixed rate of interest. Bonds are another interest-earning investment, where money is lent to the government or a company at an agreed interest rate for a certain amount of time.

Property

Property is an investment where a house, unit, factory, building or land is purchased with the aim of that property increasing in value. The property may be rented out, raising additional money.

Equities

Equities are shares, sometimes called stocks. A share is a unit of ownership in a company. Share investors become part-owners of the company and hope the value of their shares will rise. If the company makes a profit, it may also make a payment, called a dividend, to the shareholders. BHP Billiton is an example of a company that the general public can buy shares in.

Superannuation

Superannuation is a method of saving for retirement. Employers contribute to their employees' super funds, and personal contributions can also be made to a super fund. For most people, superannuation is taxed at a lower rate than other non-super investments.

Source 3 There are many different investment options to choose from.

case**study**

Are you interested in making money from investing?

Warren Buffett is an American investor and businessman who is consistently ranked among the world's wealthiest people. Buffett is also a **philanthropist** who has pledged 99 per cent of his wealth to charity.

At a young age, Buffett loved the world of business. In high school, he made money from activities such as selling newspapers, golf balls and stamps. Buffett started investing when he was 11 years old, buying three shares at $38, only to see them fall to $25 a short time after. However, he waited till the same shares reached $40 and then sold them. Buffett learned that sometimes it is better to have patience and wait – he later saw these stocks climb to $200 a share.

Here are some of Buffett's words of wisdom on investing in the sharemarket.

Earnings

'If the business does well, the stock eventually follows.'

Having the right tools

'You should have a knowledge of how business operates and the language of business (accounting), some enthusiasm for the subject, and qualities of temperament which may be more important than IQ points. These will enable you to think independently and to avoid various forms of mass hysteria that infect the investment markets from time to time.'

Only buy securities that you understand

'Investment must be rational; if you can't understand it, don't do it.'

Source 4 Warren Buffett

$ 93.02 sell $ 30.6
$ 75.57 sell $ 76.9
$ 38.30 sell $ 42.3
$ 2.85 sell $ 13.2
$ 46.07 sell $ 24.8
$ 32.51 sell $ 87.5
$ 64.06 sell $ 30.4
$ 23.70 sell $ 91.9

Source 5 Investing in the sharemarket can be nerve-wracking!

Check your learning 12.2

Remember and understand

1 Finish the following sentence:
Investments with the potential to grow dramatically also mean there is potential to _______ a significant amount of money.

2 What are the two monetary benefits that can be gained from:
  - **a** buying a property
  - **b** buying shares?

3 What is the purpose of superannuation as an investment?

Apply and analyse

4 Assess whether the following investors are risk-tolerant or not.
  - **a** Jun has $100 000 to invest but the thought of losing any of it means she can't even sleep at night.
  - **b** Julian wants to make a reasonable amount of money from his investments and is not overly concerned if his investments lose value in the short term.
  - **c** Chris has $20 000 put aside to go overseas. He decides to invest the money for a year, but cannot bear to think his investment could lose money, which might mean he would have to cancel his trip.

5 Why do you think it is important to have a basic understanding of a company you decide to buy shares in?

6 According to Warren Buffett, what personal characteristics do you need to be an effective sharemarket investor?

Evaluate and create

7 Make a list of goals you may have, then group them into the age brackets listed in the table below. Identify the time in your life you will most likely need to start saving and investing to reach these goals. For example, if you are a teenager and want a car, it is best to start saving straight away. If your goal is to buy a house, you might delay starting saving for this until you are in your early 20s.

8 Check the latest interest rates for term deposits on one of the bank websites. Take one of your short-term goals and use the savings goals calculator on the MoneySmart website to find out how long it will take to reach your goal if you invest in an interest-earning investment.

9 Read each of the following quotes and explain the point the author is making
  - **a** 'In the long run, it's not just how much money you make that will determine your future prosperity. It's how much of that money you put to work by saving it and investing it.' Peter Lynch
  - **b** 'If investing is entertaining, if you're having fun, you're probably not making any money. Good investing is boring.' George Soros
  - **c** 'Behind every stock is a company. Find out what it's doing.' Peter Lynch
  - **d** 'If you don't study any companies, you have the same success buying stocks as you do in a poker game if you bet without looking at your cards.' Peter Lynch

Age	Goal	Short-term/medium-term/ long-term goal	Approximate cost	Time to start saving
16–20 years				
21–30 years				
31–40 years				
41–60 years				

12B rich task

Playing the sharemarket

The sharemarket is like any other market where goods are bought and sold at a certain price. In a sharemarket, shares are bought and sold – this is called trading. A share is a unit of ownership in a publicly listed company. Myer, David Jones, Harvey Norman and Telstra are public companies you might know.

The **Australian Securities Exchange (ASX)** operates the sharemarket. It approves companies that wish to be on its trading list and ensures they abide by trading rules. You can become a shareholder in a company through purchasing shares from a stockbroker. A stockbroker can buy and sell shares through ASX on your behalf for a fee. This is called brokerage.

Share investors hope that their shares increase in value. The company may also pay a dividend, a payment made if the company makes a profit.

There is risk associated with investing in the sharemarket. Shares purchased may decrease in value, and will make a loss.

Playing a hypothetical share investment game can provide valuable knowledge before you take risks with real money. John Forsyth won the ASX Schools Sharemarket Game in 2013 and makes the following comments.

> Over the past few months I have taken part in the ASX Sharemarket Game…I started with $50 000 like everyone else in Australia, and over the course of 10 weeks I watched my portfolio grow to nearly $61 000 dollars. With the money, I thought it would be best to buy fewer types of shares, but of greater amounts… I put roughly $12 500 on each share, and with the left over money I purchased two other shares. I only made a few **trades** throughout the entire game; I knew I would benefit from this, because if I was to constantly change my shares around there would not be any real growth. My main investment strategy was to wait and watch; patience was probably my main strategy to be honest. So overall, the three keys to my game were: not to trade often, to spend all the money I was given and to be patient.
>
> Game 2 winner 2013: John Forsyth, Year 11,
> Mercedes College, South Australia

skill**drill**

Using a game to understand the sharemarket

Playing games in economics is fun, and it can also be a great way to learn about how the sharemarket works.

In this activity, you will be playing a hypothetical sharemarket game. It is important to understand that there is a lot to learn about the sharemarket. Don't be disheartened if, like Warren Buffett, your shares lose value soon after you buy them!

In this game, you will select a **portfolio** of shares in up to five companies and calculate their value over the next five weeks. You will have $50 000 to 'spend'. Remember that this is a learning exercise so you will be guessing which stocks to choose at this stage. Before you play this game on paper you will need to:

Step 1 Go to the ASX website using the link in your obook and choose company information from the 'Prices and research' tab. View the complete list of stocks by clicking on the 'View all companies' link below the 'Search by code or company' search bar.

Step 2 Scroll though the list and investigate a company you recognise or have heard about. Each company will have a three letter code (hyperlinked) so click on that code to take you to more specific information about that company.

Step 3 Use the menu bar on the left to find out more information about your chosen company. In particular, look at the price history for the last five days. The last price is the price the share sold for at the end of that trading day. Also check the chart showing the share price history for the company you have chosen. Remember that even if the chart shows the share price is performing well, it may decrease tomorrow!

Harvey Norman
MYER

Source 1 Myer and Harvey Norman are both public companies you can buy shares in.

Step 4 You can 'buy' shares to the value of $50 000 by completing the table below, and hold them until the end of the game. Choose up to five companies to invest in. You may spread 'your' $50 000 over these five companies, or choose to invest in just one.

Step 5 Each week, fill in the table, again using the last price the shares sold for. Complete the total value of the portfolio into the table below.

Apply the skill

1 After holding your share portfolio for five weeks, did you make or lose money?

2 What did you learn about the risk involved in buying shares?

3 What could you do to make a more educated guess about companies to invest in?

4 If you had actually bought these shares, what is the fee you would have been charged called?

Company	**Code (unique abbreviation that identifies the company)**	**Last share price**	**Number of shares purchased**	**Value of shares in each company (share price x number of shares**
		$		$
		$		$
		$		$
		$		$
		$		$
			Total value of portfolio (add all values in the last column)	$

Total value of portfolio at *Week 1* **Date _____**	**Total value of portfolio at *Week 2*** **Date _____**	**Total value of portfolio at *Week 3*** **Date _____**	**Total value of portfolio at *Week 4*** **Date _____**	**Total value of portfolio at *Week 5*** **Date _____**

Extend your understanding

1 Ask your teacher to set up an account on the ASX website, playing the Sharemarket Game online (follow the link in your obook) where you can actually trade shares online for a period of ten weeks. You can choose from 200 stocks, play in teams or individually, and see how you would do in real market conditions without actually risking any real money.

12.3 Minimising financial risk – avoiding scams

Scams are traps to dishonestly take a person's money. There are many different types of scams that you should avoid. Putting down the phone or not opening an email from an unknown source – and definitely not clicking on a link – can be the best course of action you could take to avoid being scammed out of your money.

Scams that target your emotions

Scams that set out to personally target you with the ultimate aim of taking your money have become more common in recent years. Here are just some of the personal scams that are currently in operation:

- Charity scams – the scammer poses as a genuine charity and takes advantage of the giver's generosity.
- Psychic and clairvoyant scams – the victim may be told that they will be in some sort of trouble in future. To avoid this, they inevitably have to pay money for something like a lucky charm. In some cases the victim is threatened with a curse if they don't pay a fee to the scammer.
- Romance scams – the scammer takes advantage of someone looking for romance.

Investment and online account scams

There are a range of investment scams that offer the investor a 'rare' opportunity to make money very quickly. These operators may make an unsolicited phone call, or send an email. Some investment scammers promise huge tax reductions.

Paying for goods and doing banking online can be convenient, but consumers need to be aware of scams such as:

- phishing emails that pretend to be sent on behalf of your bank asking for account details
- phone calls from a scammer informing you there is a problem with your account, asking you to provide your account details or passwords
- the copying of information from the magnetic strip of an **ATM** or credit card so that a 'clone' of your card can be produced and used illegally.

Avoid being scammed!

Every one of us might be fooled at some stage in our lives, but there are ways to reduce the risk of being involved in a scam (see Source 1).

If you are party to a scam, you should report it to the appropriate authority. For example, if the scam involves someone gaining access to your online bank account, you should contact your bank immediately. You can also report a scam to SCAMwatch, which is run by the **Australian Competition and Consumer Commission** (**ACCC**).

Be suspicious	Even if you have a trusting nature, be aware that others (particularly those that you don't know well) may not be honest in their dealings with you.
Be cautious	Don't give strangers your money, credit card or bank account details. Keep your credit and ATM cards in a safe place.
Be patient	Don't be pressured into doing something quickly. If you are interested in a deal, get a second independent opinion on what is being offered.
Be alert	Check bank and credit card statements for any unexplained transactions.
Be wise	Understand that there is little chance of getting rich quickly from a business scheme.

Source 1 Some golden rules to help you avoid being scammed

casestudy

How would you feel if your online romance was a scam?

Nigerian online dating scams have become notorious in recent years. In one such case, a 51-year-old woman from Perth lost thousands of dollars. The Perth woman (who does not wish to be identified) developed an online relationship in 2013, with a man who called himself Gary. He was, however, a Nigerian scammer who had stolen a photograph from a website and set up a fictitious profile on the RSVP dating site.

Shortly after meeting online, Gary quickly declared his love for the woman and asked her to send him money because he was in financial crisis. The woman sent three payments, and then Gary asked the woman for her bank details so he could transfer some money into her account. This is when the victim realised she was probably part of a fraud and contacted police. The police actually caught the scammer by matching fingerprints found on a document he had sent, to a person who was known to the Nigerian police. 'Gary' has been charged with obtaining money under false pretences.

Many victims of romance scams never see their money again, but the woman in this case was able to recall some of the repayments from the bank, once she learned Gary was a conman.

Source 2 If someone you've met online through a dating site asks you to give them money, it could be a scam.

Check your learning 12.3

Remember and understand

1 What is a scam?

2 Why is it important to know about the types of scams that exist today?

3 Describe a scam you know about, or research one online, and outline what happened in the scam.

Apply and analyse

4 In the following examples, identify what consumers can do to protect themselves.

   a You open the door and a young man is standing there with a donation tin. When you ask for his identification, he says he didn't bring it with him.

   b You receive an email from your bank asking you to confirm your account details with them.

   c Someone you met on a dating site, but haven't met in person yet, asks you for a loan.

   d You go to the ATM and never cover the keypad while entering your PIN. You check your credit card statement and find there are many transactions you know nothing about.

   e You receive a call from a well-spoken young man who lets you in on a secret deal to make money from shares.

Evaluate and create

5 How wise are you when it comes to scams? Take the online scam quiz at the Consumer Affairs Victoria website. Write a paragraph outlining your results. Is there anything you could do to improve your safety against being scammed?

12.4 Minimising financial risk – using your bank account wisely

In order to protect yourself against unnecessary risk when it comes to banking, there are a number of strategies you should be aware of. Two of the most important include keeping your personal information secure and protecting yourself against unnecessary bank fees.

Keeping your personal information safe

Your **Personal Identification Number** (**PIN**) allows you to withdraw and deposit money into your bank account. Your PIN and other passwords (such as your internet bank password) should be kept safe at all times.

Minimising banking fees

Most of us have an everyday **transaction account**, which is really an account used to pay bills and withdraw money for spending. Many people have a separate **savings account** linked to their transaction account so that they receive a higher interest rate on their savings.

Some banks and other financial institutions offer transaction accounts that do not charge a fee for allowing you to use their banking facilities (called account-keeping fees). Banks may also provide the customer with a free monthly statement listing all banking transactions.

case**study**

What would you do if money was stolen from your bank account?

Criminals with knowledge of the latest technology steal millions of dollars each year through '**skimming**.' Skimming involves copying card details while also video recording people as they enter their PIN into an ATM. These video-recording devices have become more sophisticated as they are able to record a person entering their PIN from a variety of angles now. Once retrieved, this information is used to create a copy of the card to withdraw or spend the victim's money.

Many people are in the habit of covering their hand when entering their PIN but it is also advisable to use a newspaper or purse to ensure the keyboard is completely blocked out.

To combat skimming, many new ATMs now have what is called 'jitter' technology so that the ATM card vibrates as it enters the existing machine, making it impossible to capture card details. If, however, you are a victim of skimming, the banks will cover the loss, provided you have not contributed to the loss by disclosing your PIN, for example, or accidentally leaving your card in an ATM.

1. **Don't** tell anyone your PIN.
2. **Don't** write your PIN on your card.
3. **Don't** keep your recorded PIN with your card.
4. **Don't** use your birthdate or part of your name as your PIN.
5. Check bank statements for unauthorised transactions.
6. Cover your hand over the keyboard when entering your PIN.
7. A financial institution should not need to ask you for your PIN.
8. When using internet banking, remember to log out.

Source 1 Your PIN is the key to your money so make sure it is safe. If you think that someone knows your PIN or your card is lost or stolen, you should contact your bank immediately.

It is advisable to check the banking fees charged before setting up an everyday transaction account with a bank or other type of financial institution. Consider switching to another account or bank if you already have an account but are being charged too much. Banking fees to check include:

- **EFTPOS** fees – when purchasing goods using EFTPOS (Electronic Funds Transfer at Point of Sale), money is transferred electronically from your account to pay for the goods. A fee may be charged for this.
- **ATM** fees – when withdrawing money from an ATM, banks may often charge a fee for this service. Try to avoid using another bank's ATM or you may be charged a higher fee.
- Phone and internet banking fees – banks often charge customers fees for transferring money or checking balances via phone or internet banking services. Check the fees associated with your online bank account.
- **Exception fees** – exception fees are charged if there are insufficient funds in an account to cover a transaction. For example, you may have a monthly direct debit set up from your account and if there are insufficient funds to pay the bill, an exception fee may be charged.

It is important to understand that a bank is a business and it therefore charges fees for its banking services. If banking fees increase it is easy just to ignore it, but these small fees add up and some can be avoided. Check your bank statements next time to see how much you are actually paying the banks in fees.

Source 2 Almost six million EFTPOS transactions are made each day in Australia. Many customers find this a convenient and safe way to shop. Getting 'cash out' while making an EFTPOS transaction is one way of avoiding a separate ATM fee.

Check your learning 12.4

Remember and understand

1 Why should savings be kept in a separate savings account linked to an everyday transaction account?

2 As an account holder, are you responsible for money lost as a result of 'skimming'?

3 What is the latest technology is being used to combat 'skimming'?

4 In your own words, define what exception fees are.

5 What does EFTPOS stand for? How many EFTPOS transactions are made in Australia everyday?

Apply and analyse

6 Why do banks charge fees on accounts and credit cards?

7 In the scenario below, identify at least five faults in the way Debra uses her ATM card:

> Debra receives her new ATM card and leaves her old ATM card in her wallet as well. She quickly writes her PIN on the new card so she doesn't forget it when withdrawing money. She never covers the keypad when entering her PIN at the ATM. She withdraws money and puts her card back in her wallet with the cash, but throws the transaction record in the bin. She receives a phone call from the bank telling her there is something wrong with her card and provides her PIN to the caller in order to 'solve' the problem.

Evaluate and create

8 Access the MoneySmart website using the link in your obook. Read the information on credit cards.

  a Write a list of the fees associated with most credit cards.

  b Explain why it is crucial to keep up to date with credit card repayments.

  c Write a paragraph detailing why you think you should get a new credit card. What factors might influence your choice of credit card?

12.5 Minimising financial risk – knowing your consumer rights

It's important that you know your rights when you go shopping so that you receive the goods and services you have paid for (see Source 1).

A consumer who purchases a good with a major problem is entitled to have the good repaired, replaced or refunded. A problem is considered to be 'major' if:

- The problem, if known, would have prevented the consumer from buying the item.
- The good is unsafe or was significantly different from its sample or description.

The product did not do what the business claimed it could or what the consumer asked for, and can't easily be fixed.

A consumer who purchases a service with a major problem (for example, a car service) is also entitled to a repair, replacement or refund in the following circumstances:

- The problem, if known, would have prevented the consumer from buying the service. For example, the car mechanic was not qualified and this wasn't disclosed.
- The service performed is substantially unfit for its common purpose and cannot be fixed within a reasonable time. For example, the car was drivable but now the engine won't even turn on.
- The service does not meet the specific purpose you asked for and cannot easily be fixed within a reasonable time. For example, the car was spray-painted instead of serviced.
- The service creates an unsafe situation.

Displaying a sign that says that refunds are not given in any circumstances is against the law. It is also against the law for a business to tell the consumer it is their policy not to give refunds. Another common misconception is that, when returning an item that has a major problem, it must be returned in its original packaging.

Consumers who have a complaint should first contact the business that provided the good or service. If the problem is still not resolved, consumers might contact their state or territory consumer protection agency.

The consumer is treated honestly and fairly

- False, misleading or deceptive claims cannot be made about a product or service.
- Products advertised must be supplied.
- The consumer must not be harassed or coerced (threatened in any way).

The consumer receives quality goods and services

- The product is safe to use, durable, free from defects, acceptable in appearance and finish and matches the description.
- The product is fit for the purpose for which it was made.
- Services are delivered with care and skill.
- Guarantees made must be honoured.

The consumer is given accurate information

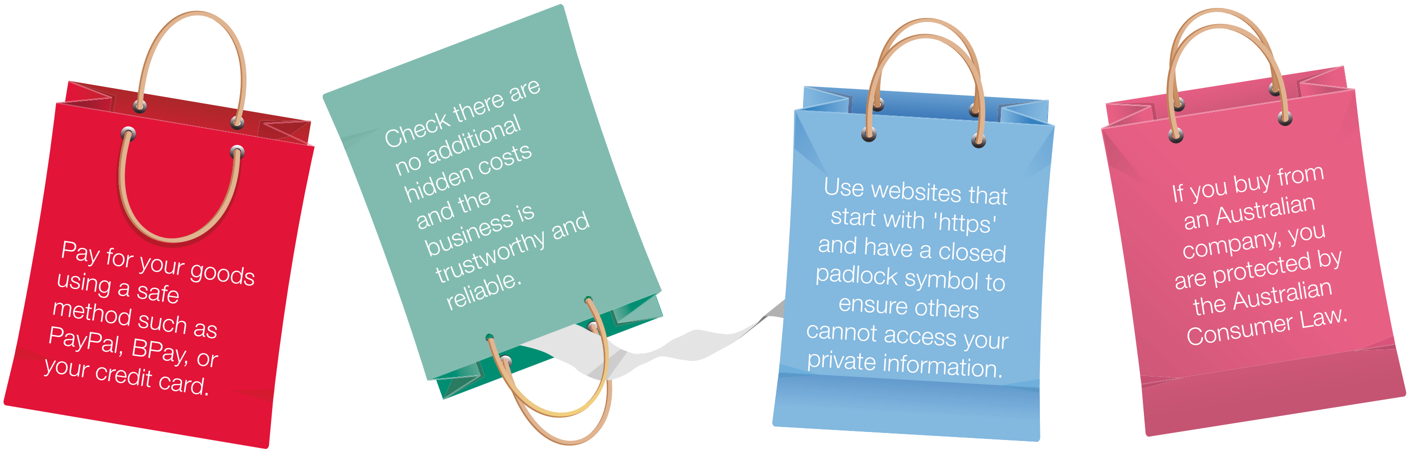
- The consumer is entitled to a receipt upon request.
- If more than one price is displayed, the consumer is entitled to the lowest priced item.
- The consumer is entitled to see the total price of the item.

Source 1 The Australian Consumer Law protects all consumers.

Your rights when buying online

If purchasing goods online from an Australian business, the Australian Consumer Law still applies. The same protections may not apply, though, when purchasing goods online from a business overseas.

Buying online can be tricky as you can only view a photograph of the item and may not adequately be able to assess its quality. If you are buying clothes or shoes, there is no opportunity to try the clothes on so you must make sure that you are able to return the items if they do not fit. There is also the added danger that you will purchase the item but never receive it, or that you will be sent a faulty or worthless item. Some scammers also set up websites offering cheap items for the sole purpose of stealing your credit card details. Source 2 provides some tips on how you can minimise the risk involved when you shop online.



Pay for your goods using a safe method such as PayPal, BPay, or your credit card.

Check there are no additional hidden costs and the business is trustworthy and reliable.

Use websites that start with 'https' and have a closed padlock symbol to ensure others cannot access your private information.

If you buy from an Australian company, you are protected by the Australian Consumer Law.

Source 2 Tips for consumers who shop online

Check your learning 12.5

Remember and understand

1 Are all consumers in Australia subject to the same consumer laws?

2 If two prices for a product are displayed, at which price is the consumer entitled to buy the product – the lower or higher price?

3 If there is a sign warning the consumer to choose wisely because no refunds are given, is the consumer entitled to a refund if there is a major problem with the item?

4 What can the consumer do if they have purchased a good with a major problem?

Apply and analyse

5 Explain why the consumer would be entitled to a repair, replacement or refund in the following circumstances.

  a Mario buys an electric mixer and sparks fly from the mixer as soon as he uses it.

  b Philippa has long hair she wears in a ponytail. She asks her hairdresser to trim her hair. The hairdresser cuts the ponytail off, leaving Philippa with short hair.

  c Jason purchases a clock but it does not keep correct time.

  d Jazzlyn purchases a hairdryer that breaks down after a week.

  e Georgia asks for the gold buckle on her black shoes to be replaced, only to find the gold buckle has been replaced with an orange buckle.

  f Ed unwraps his new tracksuit only to find there is a small hole in the fabric.

Evaluate and create

6 Have you or someone you know ever purchased a good or service with a major problem? If so, explain the situation and what was done to resolve the issue.

7 Pick a product you would like to buy online.

  a Find out what the return policy is on the item.

  b Jot down as much information as you can about the seller.

  c How can you tell whether the private information you provide online is going to be secure?

  d Explain why buying online from an overseas business can be riskier than dealing with an Australian business online.

12C rich task

A major financial decision – buying a car

Now that you've learned about minimising financial risk, it's time to put what you have learned into practice. Buying a car is a major purchase so it is important to do some research so you make the right decision. Here is a guide to help you get started.

Choosing the right car at the right price

After you have determined whether you are going to buy a new or used car, there's some extensive research to do, both online and on foot, to ensure you purchase the car that is right for you.

Don't be afraid to ask for a discount. Car dealers often match the deal another car dealer makes in order to get the sale. If you do make a decision in haste, or are pressured into buying a car, you can change your mind provided the car is purchased from a licensed motor car trader and you notify the dealer in writing. A cooling-off period of three clear business days commences when a contract to purchase the car has been signed.

Additional costs and charges

Be aware of additional costs associated with buying a car. You may not be aware of the following charges.

- **Goods and Services Tax (GST)** will be charged at a rate of 10 per cent.
- **Stamp duty** is another form of tax that must be paid (the cost of this varies from state to state).
- **Registration fees** must also be paid when a vehicle is first registered and then annually from that date.
- New vehicles may also incur a dealer delivery fee to cover the trader's costs of preparing and delivering the vehicle. If the car is a luxury vehicle, a luxury car tax will be imposed.
- If buying a used car, a registration transfer fee will be charged to transfer registration to a new owner.

Warranties

All new cars come with a manufacturer's **warranty** providing some protection should faults or defects occur. Used cars sold by a licensed motor car dealer also have a statutory warranty if they are less than 10 years old and have travelled less than 160 000 kilometres. The consumer should check the terms of the warranty to ensure they know how long the car is under warranty for.

Taking out a loan

Check the interest rate and how much interest you will have paid on the loan after you have repaid it. Shop around for the best loan deal rather than just accepting a loan deal the car dealer may offer you.

Insurance

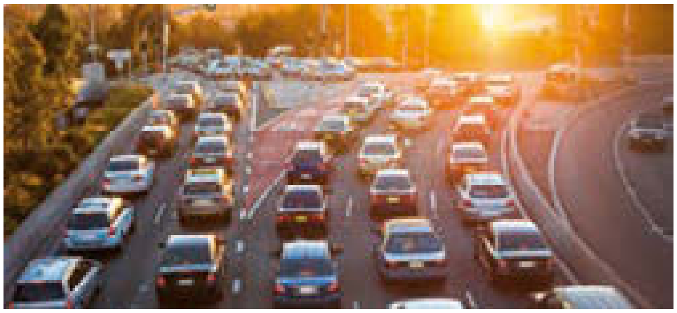
Comprehensive car insurance protects you against car fire, theft, accident and damage to your car and damage to other cars and property. Third-party property insurance gives you less cover, protecting you only against damage caused to other cars and property. The amount of car insurance you pay will vary depending on the car make and model chosen.

Service and repairs

Whether you buy a new or used car, you need to maintain a car in good condition to avoid breakdowns and more extensive repairs. New cars may come with capped pricing schemes so that you know the cost of maintaining your car upfront, but it is important to check and compare the servicing schemes being offered.

Fuel efficiency

Consider buying a car that does not need as much fuel so you save on fuel costs, while reducing greenhouse gas emissions and air pollution.



Source 1 Australia is a nation of car users with approximately 7 out of 10 Australians aged 18 years and over travelling to work or full-time study by car – either as a passenger or driver.

skill**drill**

Conducting a cost–benefit analysis

A **cost–benefit analysis** identifies all the strengths and weaknesses of taking a particular course of action. Analysing costs and benefits may be useful in business to determine whether the project is likely to be profitable. It may also help a business decide which of several projects should be undertaken.

Step 1 Identify the costs and benefits of a particular project or purchase. Costs should take into account initial outlay, as well as interest paid over time. The analysis also should take into consideration the possibility of a successful project/purchase, but also the costs if the project/purchase is not successful. It should also consider the timeframe involved to reap any benefits.

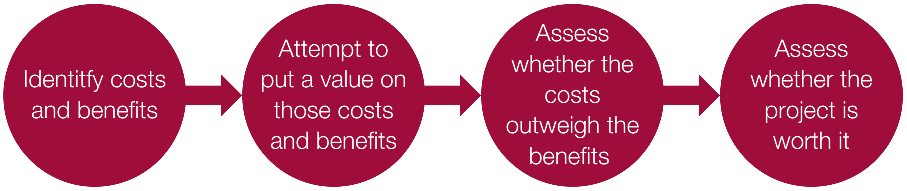
Step 2 Attempt to put a value on those costs and benefits. Factors such as **inflation** and interest rates need to be considered. A program such as Excel's cost–benefit analysis template could help you with this.

Step 3 Assess whether the costs outweigh the benefits.

Step 4 Taking this information into account, assess whether the project or purchase is worth the investment.

Apply the skill

1. Conduct a cost–benefit analysis of buying a particular car. You have up to $55 000 to spend over a five-year period. This includes the initial cost of the car and its running costs. Refer to the RACV's *Car owning and operating costs guide* on their website. A link to this is available in your obook. Choose at least *three* cars you would like to purchase within this price range. The guide itemises the cost for buying and running a selection of cars over a five-year period (driving 15 000 km per year).
2. Identify costs and benefits and put a value on these benefits. Complete the following table in Source 3, listing the weekly and annual cost over five years according to the RACV guide. Use the Internet to find more information on the benefits of the three cars of your choice.
3. Assess whether the costs outweigh the benefits. Make a decision about which car would be the best buy for you and explain the reasons for your choice. Take into consideration costs and personal benefits you think the car would bring you.


Identify costs and benefits
Attempt to put a value on those costs and benefits
Assess whether the costs outweigh the benefits
Assess whether the project is worth it

Source 2 Steps in cost–benefit analysis

Car	Costs	Benefits
e.g. Ford Focus Ambiente 5D Hatchback 1.6L 6 SP	Weekly costs $ Annual cost over five-year period $	e.g. Bluetooth® hands-free phone, air-conditioning, rear parking sensors
Car 1		
Car 2		
Car 3		

Source 3 Cost–benefit analysis table

Extend your understanding

1. Undertake a cost–benefit analysis of taking out a $15 000 loan to buy a car as opposed to using public transport, such as the train.

Australia and the global economy

The changing work environment

‘Choose a job you love, and you will never have to work a day in your life.’ For actors such as Chris Hemsworth and Anthony Hopkins, working involves using acting skills to portray characters in a film. However, a film is more than its actors. Costume designers, hair and make-up artists, film crew, special effects artists and stunt performers are just a few of the workers that may also be involved.

When choosing a career, you should consider factors such as skill, ability, educational requirements, pay and working conditions. While you are studying, you may work part-time to gain experience and **earn** extra money. It’s important to understand what is expected of you once you enter the workforce and what you can expect from your **employer**.

13A

How do changes in the workplace affect people?

1. In what ways have new technologies changed the work of a teacher, builder and shop assistant?
2. Why do you think people today change jobs more often than they did in the past?
3. What careers interest you the most and why?

13B

What are the roles and responsibilities of people in the workplace?

1. Why might an employee be dismissed from a job? Can you think of any reasons this might be justified?
2. Imagine you start a new part-time job. On your first six-hour shift you do not get a break, you have to use the cash register without any prior training, then your boss says he is going to reduce your hourly rate of pay. Is your employer meeting his responsibilities?

chapter 13

Source 1 Just another day at the office for actors Anthony Hopkins and Chris Hemsworth on the set of the blockbuster Hollywood film, *Thor*.

13.1 The world of work is constantly changing

Work has changed dramatically over the last 50 years both in Australia and around the world. In the 1960s, men traditionally went to work full-time in order to support their wives and young families. Women often married at a relatively young age, and it was common for them to leave the workforce in their early 20s to start a family. Today, nearly 60 per cent of the female population in Australia over the age of 15 are either employed or seeking employment. Many of these women now juggle both work and family commitments. Many men are now choosing to stay at home with their young children.

In addition to these changes, there has also been great change in the industries that people work in. In Australia in the 1960s the manufacturing industry employed 26 per cent of all workers. Today, manufacturing employs only 8 per cent. Instead, the **service sector** is now our largest industry. Examples of large service industries include tourism and hospitality services, financial and **insurance** services, education and training services, and healthcare.

Globalisation has also affected the world of work. Some Australian **businesses** have been unable to compete against countries such as China that pay lower wages and can therefore produce goods more cheaply. Some businesses, however, have thrived, and have been able to employ more people and produce new **products** for larger **consumer** markets than those found in Australia.

Australia's ageing population will also affect work in the future. By 2060 it is expected that the number of people in Australia aged 75 or over will increase by 4 million. This represents an increase from about 6.4 to 14.4 per cent of the population. There will also be fewer new workers entering the workforce because of a decline in the number of babies being born each year in Australia. These factors mean that skilled and experienced workers may be much harder to find.

Check your learning 13.1

Remember and understand

1 What Australian industry has declined since the 1960s?

2 What percentage of the population is expected to be 75 or over in 2060?

Apply and analyse

3 Give one example of an occupation in each of the following service industries:
   a Education and training
   b Tourism and hospitality
   c Financial and insurance services

4 Circle the following jobs that are no longer required today and explain why this is the case.
   a Clerical worker
   b Lamplighter (a person who lights street lamps)
   c Shopkeeper
   d Sweeper (a person employed to physically sweep streets and keep them clean)
   e Switchboard operator
   f Iceman (a person who delivers huge ice blocks to people's homes)
   g Garbage collector
   h Accountant
   i Milkman
   j Store elevator operator

5 Think of three reasons why female participation in the workforce has increased over the last 50 years.

Evaluate and create

6 Explain why globalisation can lead to both increases in employment and increases in unemployment depending on the type of industry.

7 Ask your grandparents or an elderly friend how work has changed since their first job. Create a set of questions for your interview, then report your findings back to the class.

Jobs have changed

Common jobs

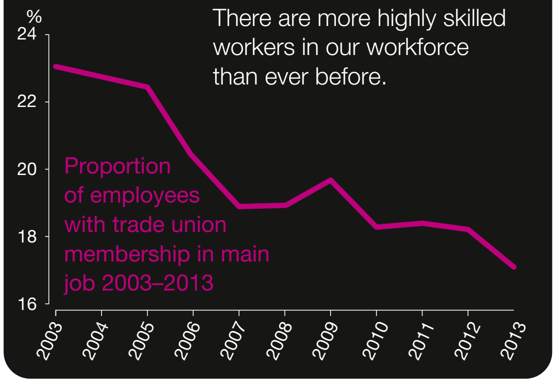
1966

- Tradesmen
- Production process workers
- Labourers
- Farmers
- Fishermen
- Timber workers

Today

- Professionals
- Clerical and administrative workers
- Technicians and trades workers

Fall in union membership



There are more highly skilled workers in our workforce than ever before.

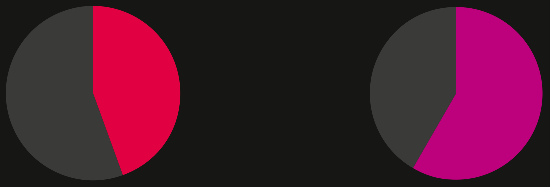
Technology alters the way we work

- Fewer workers may be required to do the same job.
- New jobs may arise in areas such as Information Technology.
- Global products can be created increasing work opportunities for some people.
- Employees can work remotely.

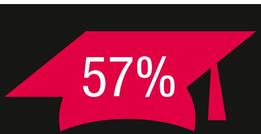
Increased female participation in workforce

Women in workforce

1983 44.5% 2013 58.5%

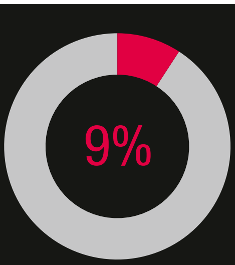


The female workforce participation rate has grown from 44.5% in July 1983 to 58.5% in July 2013 according to Australian Bureau of Statistics (ABS) figures.



Australians are more educated

The proportion of people aged 15–64 years with a non-school qualification increased from 47% in 2001 to 57% in 2013, according to the ABS.



Expect to retire before 60

Australians expect to retire later

The average age for men who retired less than five years ago was 63.3 years, while the average age of retirement for women was 59.6 years according to a recent ABS study.

The age at which a person can qualify for a pension will increase to 67 by 2023, meaning many Australians will have to work longer.

9%

Employees job hop more frequently than ever before

Nearly one in ten people have changed their job in the previous 12 months, according to the latest ABS statistics.

Globalisation affects the workforce

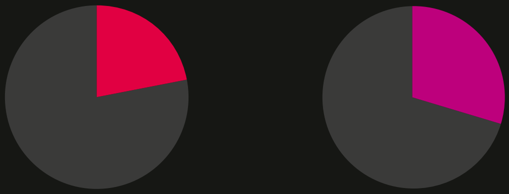
More people will work overseas to develop their careers in the future, according to Hays recruiting company.

Some Australian businesses will be unable to compete with other low-wage countries, leading to business failure and unemployment.

Globalisation can, however, create new and larger consumer markets, leading to greater employment.

Growth in part-time work

1990–91 22% 2010–11 30%



The proportion of employed people who were working part-time rose from 22% in 1990–91 to 30% in 2010–11.

Source 1 There have been many changes in the workplace in recent years.

13.2 Enterprising skills in the workplace

An **enterprising** individual is one who shows initiative, is prepared to take on a new project, sometimes overcoming significant obstacles, and is also prepared to take risks in order to succeed. Enterprising individuals sometimes start their own business, while others use their enterprising skills to achieve success working for a company or organisation. An **employee** might, for example, have a new idea to improve a product or service that really benefits the organisation they work for. Enterprising skills can also be used to promote a social cause and make a difference to the lives of others. For example, Social Enterprise Champion Award winner Luke Terry has led the development of a multimillion-dollar commercial laundry that will employ long-term disadvantaged people.

case**study**

Could you be enterprising?

Morgan Hipworth, a 14-year-old student from Melbourne, has taken the café world by storm with his twist on the simple doughnut. Morgan started out small, supplying his homemade doughnuts to a café in Melbourne, and now supplies up to 500 doughnuts a week. He fits 40 hours of baking a week into his schedule and still has time for school, homework and sport.

Morgan's doughnuts are not your regular doughnuts, though. He bakes the doughnuts at home and 'injects' his own flavours into them. Some even come with a syringe of flavour for consumers to inject into the doughnut themselves! Morgan doesn't skimp on quality either, using the best ingredients, such as real butter.

At the age of seven, Morgan was inspired by *Junior Masterchef* and has turned his passion into a growing business. After completing a business degree, Morgan plans to open his own restaurant and café.

Being enterprising encompasses a whole range of skills. Someone, for example, may have a fantastic idea but lack the determination or project management skills to see their idea materialise into a successful product or service. Source 2 lists some of the associated skills that enterprising individuals may possess. Enterprising skills such as these are said to be a more powerful predictor of long-term job success and performance than technical knowledge.

Source 1 Morgan Hipworth's doughnut creations are a hit with café customers in Melbourne.

Enterprising skills and examples

- **Creativity and innovative skills**
  Creating a unique product that solves a problem
- **Analytical skills**
  Identifying a problem and how it can be solved
- **Digital literacy skills**
  Using social media effectively
- **Financial literacy skills**
  Working within a budget
- **Project management skills**
  Ensuring tasks are completed properly and on time
- **Communication skills**
  Winning others over with a persuasive argument

Source 2 An enterprising individual usually has a range of different skills.

casestudy

Going with the flow?

Father and son team Stuart and Cedar Anderson have created a product beekeepers can use to harvest honey straight from the hive. Their unique product solves the problem of dismantling a bee hive to remove honey. The product called 'Flow Hive' is gentle on the bees and it reduces the chance of the beekeeper being stung, because the honey flows directly out of the hive.

All business ideas need to be funded, though, so the Andersons turned to **crowdfunding**. Crowdfunding is a practice where money is raised by a large number of people to finance a project or venture. A record $17.8 million dollars was raised for the 'Flow Hive' via the Internet through a crowdfunding site called Indiegogo. 'Flow Hive' is being manufactured in Australia with orders from 148 countries around the world wanting the new product. Success didn't come overnight, though. It took 10 years to perfect the product. Cedar says, 'We always dreamed it would be successful one day. But you really don't know.'

Source 3 The successful beekeeping invention 'Flow Hive' developed by Cedar Anderson (pictured) and his father Stuart Anderson used crowdfunding to finance the idea.

'Soft skills' are important too

Machines are now performing many tasks once only undertaken by humans. This is called **automation** and it has implications for the skills that are going to be in high demand in future. Many business experts are saying that individuals with '**soft skills**' (that machines do not have) will be the most sought after workers. Soft skills are personal skills such as understanding social graces (for example, covering your mouth while coughing), communicating well, managing and leading others and working well in a team. Strategic business analyst Jason Widjaja works for a large company and said that while his technical or '**hard skills**' were good, he was 'marked down in terms of adding value to meetings, workshops, interviews and all those areas where you needed to express and articulate your thoughts more clearly'.

Check your learning 13.2

Remember and understand

1 How can a person be enterprising in the workplace?
2 Why do experts believe 'soft skills' will continue to be in high demand by employers?

Apply and analyse

3 Explain why Morgan Hipworth's business is considered to be enterprising.
4 Tick which of the following individuals clearly display 'soft skills' in these instances.
   a Jem always arrives late for work, talks too loudly on the phone and continually uses social media while at work to keep in touch with her friends.
   b Michael started work at an accountancy firm and seemed to 'fit right in'. He is always courteous and goes out of his way to help others in his team succeed.
   c Raj tends to sit back at meetings and listen. He doesn't want to offer his ideas because he is too afraid they will be considered silly.
   d Jan always attends meetings on time but she talks mostly about her own successes, and, when asked, it is clear she delegates to others the work she should be doing herself.
   e Lee is always so positive and is always determined to solve problems using methods most would never think of.

Evaluate and create

5 Do you think people can learn some 'soft skills' such as working well with team members, communicating well with others and complying with social rules?

13A rich task

The job market outlook for the future

'What do you want to be when you grow up?' It's a question we are all asked from an early age and many of us change our mind several times before we even begin our first career. Indeed, it is common now for people to have multiple careers in a lifetime instead of just one.

Source 1 The ability to earn a good salary is a factor many consider when choosing a career. The highest paid workers in Australia are surgeons, according to the Australian Taxation Office report 2012–13.

Interest in a chosen field, ability, educational requirements, pay and working conditions are just some of the factors to be considered when choosing a career. Overall employment prospects for your chosen occupation could also be considered. Source 2 shows the occupations that have the brightest employment prospects in the future. As you can see, most of the growth areas are in the service sector. You can find employment prospects for most occupations at the Department of Employment website.

Source 2 As the population ages, many occupations in the field of healthcare will experience increased demand.

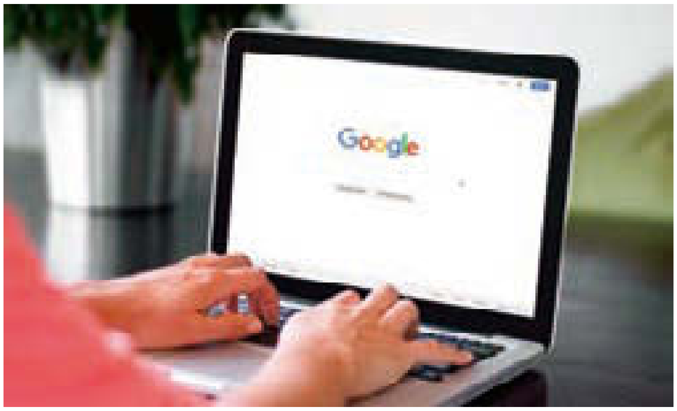
Occupation	5-year employment growth to 2016–17 (%)	Employment levels at 2016–17 ('000s)
Drillers, miners and shot firers (shot fires position and detonate explosives)	27.7	72.6
Mining engineers	23.5	10.1
Internal medicine specialists	20.5	8.0
Other medical practitioners	20.5	13.2
Registered nurses	20.5	274.8
Aged and disabled carers	20.4	140.6
Other construction/mining labourers	18.0	10.9
Generalist medical practitioners	17.7	61.5
Surgeons	17.1	6.6
Electricians	17.1	162.9
Other building/engineering technicians	16.6	25.2
Nursing support/personal care workers	16.5	95.6
Graphic/web designers, and illustrators	16.0	52.8
Physiotherapists	16.0	19.4
General managers	16.0	59.4
Anaesthetists	16.0	3.4
Social workers	16.0	25.7
Health and welfare services managers	16.0	21.4
Child carers	16.0	133.4
Chief executives/managing directors	16.0	75.6

Source: Department of Education, Employment and Workplace Relations, 2015

skill**drill**

Searching for relevant and reliable information online

Have you ever forgotten your keys or wallet? The best approach to finding your lost possession is to 'refine' your search, perhaps by thinking where you were when you first lost your keys or wallet and checking there first. It's the same with searching for information on the Internet. In order to find what you are looking for, you need to narrow down your search using keywords. You must also evaluate the reliability and credibility of each website you find.



Use the following steps to find reliable information on the Internet:

Step 1 Identify keywords related to your topic and type these into a search engine such as Google. (Use only these keywords – do not type in whole sentences or questions.)

Step 2 Add further relevant keywords to refine your search if you cannot find what you want on your first attempts.

Step 3 Look beyond the first page of results. The best results do not always appear first.

Step 4 Assess the reliability of each site by asking yourself:

- Who is the author or creator? If it is an individual, do they have their credentials listed (e.g. a degree or title)? If it is an organisation, is it a reputable organisation such as a government or university department?
- What is the purpose of the website? Is it trying to inform, persuade or sell?
- Is the site objective? Is the author's point of view biased?
- Is the information accurate? Can the information be verified if you cross-check it with other sources of information?
- Does the site contain many spelling mistakes or grammatical errors? If so, this may be an indication that the site is not particularly reliable.
- Is the information current? Can you find evidence of recent updates?

Apply the skill

1 Pick an occupation you are interested in and undertake an internet search about the following:
   a projected employment prospects
   b qualifications required
   c likely earning potential.

2 Compile a brief summary of details about the profession you are interested in, based on your Internet search.

Note: If you are interested in becoming a bricklayer, for example, you may want to search more generally first with your keywords rather than just entering the term 'bricklayer' into a search engine.

Extend your understanding

Now that you have some basic understanding of the earning potential and likely job prospects for your chosen occupation, you may wish to talk to someone in that field.

1 Use any contacts you have to arrange a five-minute chat, either on the phone or in person. If you don't have any contacts, consider writing a letter or email stating that you are interested in talking to a staff member about their career.

2 Write a list of questions that will guide you through your five-minute chat beforehand. After learning more about your chosen occupation, are you still interested in pursuing it?

13.3 Roles and responsibilities of employers and employees

People work for many different reasons. For some, being paid is the primary reason for working. For others, such as people who volunteer, helping others in need might be the most important reason for working. Think about a job you would like to do in the future and rate what you consider to be the most important (1) to the least important (10) factors.

Rating 1–10	Job satisfaction factors
	Interesting work
	Pay and benefits
	Flexible work arrangements (for example, hours spent working, ability to work from home)
	Opportunities for promotion
	People you work with
	Sense of achievement and recognition
	Secure employment
	Helping others through the work you do
	The organisation
	Autonomy (working with little supervision, being able to make decisions)

Source 1 Different factors contribute to job satisfaction for different people.

Whatever work you choose in future, it is important you understand your rights and responsibilities, as well as those of your employer. An employee, or worker, is a person hired to complete specific tasks in return for monetary payment. An employer is a person or organisation that hires workers to complete specific tasks and in return pays them.

Employer obligations

Employers have specific legal obligations to their workers (see Source 3). In Australia, employers must pay employees the minimum wage – a base rate of pay for ordinary hours worked. Minimum pay and other minimum employment conditions are set out in a legal agreement called a **modern award**. There are 122 of these modern awards, each applicable to a particular industry or occupation.

Many workplaces, however, have what is known as an **enterprise agreement**, which is an agreement about wages and working conditions made directly between employers and employees. Such agreements must be approved by the **Fair Work Commission**. If a workplace has an enterprise agreement, the modern award does not apply. The process of negotiating an enterprise agreement is sometimes called enterprise bargaining, because each party is arguing their position and what pay and work conditions they want. The employer may gain improvements in work efficiency and the employee might gain better benefits and more flexibility.

When approving the enterprise agreement, the Fair Work Commission applies what is known as the 'better off overall' test. This means the commission must be satisfied that each employee would be better off overall under the enterprise agreement than if the relevant modern award applied. For example, the minimum pay rate in the enterprise agreement cannot be less than the modern award.

Each enterprise agreement must also not exclude or provide lesser entitlements than the 10 national employment standards introduced in 2010. For example, one of the standards is that an employee is entitled to four weeks of annual leave per year. If the enterprise agreement only stated the employee was to be given two weeks of annual leave, the enterprise agreement would not be passed.

Source 2 Under enterprise agreements, employers must not provide lesser entitlements than the national employment standards. For example, all employees are entitled to four weeks of annual leave per year.

Employer responsibilities

As an employee, I expect my employer to:

- provide a safe work environment
- pay appropriate sick leave
- provide paid holiday leave
- pay **superannuation** so when I retire I have some savings
- provide sufficient work breaks, such as a lunch break
- ensure there is no unlawful workplace **discrimination**.

Source 3 Employees expect their employers to fulfil their legal obligations such as paying the correct wage and providing a safe work environment.

Employee responsibilities

As an employer, I expect my employee to:

- complete the required hours of work
- be honest and accurate with money
- keep certain business information confidential
- give the required notice before leaving
- obey workplace rules such as safety and anti-discrimination rules.

Source 4 Employers also expect their employees to fulfil their legal obligations, such as fulfilling their job requirements and completing work.

casestudy

Is it up to the employer to decide your pay?

Maria Doherty, operator of a berry farm in Victoria, was fined $11 500 in 2012 for underpaying a 20-year-old male shop assistant between December 2006 and June 2009. The employee was paid $10.79 to $12.78 an hour but was entitled to almost twice that rate.

According to Fair Work inspectors, Doherty said that her employee 'had the mental capacity of a 13-year-old and was not worth $17 or $18 an hour'.

Federal Magistrate Riley, who heard the case, said that Doherty 'seems to have been under the misapprehension that she was able to pay (the employee) as little as she believed his time was worth, rather than the legally required minimums'.

In total, the employee was underpaid $31 040. The Federal Magistrate ordered that the fine of $11 500 be given to the employee as some compensation for lost pay. Further legal proceedings were going to be taken but the berry farm has since gone into **liquidation**. Unfortunately, the employee has little chance of recovering the rest of the money he is owed.

Source 5 The employee of a berry farm was entitled to a legally required minimum wage.

Source 6 Employees have a responsibility to keep certain business information confidential.

case**study**

Did these employees behave inappropriately in the workplace?

Video footage of a Pizza Hut employee in West Virginia, United States, urinating into a kitchen sink at work made the news in many parts of the world. It's the type of incident that an employer never wants to hear about. Not only is it against health and safety regulations, it can damage the reputation of a business.

Employees have obligations to their employers to behave appropriately in the workplace. Closer to home in Australia, former Federal MP Craig Thomson's misuse of his former employer's money gained much media coverage. Thomson was found guilty of 65 fraud charges, relating to the misuse of his work credit card, when he worked at the Health Services Union. Among other things, the work credit card was used to pay for sex services.

A former manager of the Romeo Retail Group, Sonya Bernadette Murphy, was also found guilty of a crime in the workplace. Murphy was sacked when it was discovered she had used false invoices to pay herself $885 515.29 over a four-year period. Murphy was jailed for 18 months.

Behaving inappropriately in the workplace can also involve **sexual harassment** of colleagues, bullying, violence and discrimination.

Source 7 In the NSW case *Goldsmith v Spotless Services Limited* [2004], an employee was dismissed after she was found to have been sleeping under her desk during a nightshift. Evidence from co-workers indicates it wasn't an isolated occasion. The employee was dismissed.

Check your learning 13.3

Remember and understand

1 What are two responsibilities an employer has to an employee?
2 What is the difference between an enterprise agreement and a modern award?
3 Would an enterprise agreement that offered a lower minimum wage than the modern award be accepted by the Fair Work Commission?

Apply and analyse

4 What would happen if we didn't have laws governing the minimum wage an employee must be paid?
5 Sam hires Lee as a bookkeeper. Who is the employee and who is the employer?
6 What are the advantages of the employer and employee directly negotiating pay and working conditions?
7 Give one reason it is important to understand your rights as an employee.
8 Source 3 lists some of an employer's legal obligations. Make a list of other things you would like an employer to provide if you were the employee.

Evaluate and create

9 Go to the Fair Work Ombudsman website and list at least five of the National Employment Standards. For each, write a sentence stating why you think it might be important to uphold the standard.
10 Why is it important that we have laws that protect the rights of workers? With a partner, brainstorm some scenarios where a worker might need to rely on the protection of the law.

13.4 Protecting workers from discrimination in the workplace

Discrimination is the practice of treating a person (or a group of people) differently from another person (or group of people) based on their personal characteristics. Discrimination can take place anywhere – at home, at school, and even in the workplace. For example, a woman who is not given a promotion solely because she is pregnant is being discriminated against. Similarly, a man who is unsuccessful for a job because the hiring manager thinks he's too old is also being discriminated against.

Types of discrimination	Explanation
Race	Based on a person's race (e.g. Asian, Caucasian, Black, Indian)
Colour	Based on a person's skin colour (e.g. light-skinned, dark-skinned)
Sex	Based on a person's gender (e.g. male, female, intersex)
Sexual preference	Based on a person's sexual orientation (e.g. heterosexual, homosexual, bisexual)
Age	Based on a person's age (e.g. old, young)
Physical or mental disability	Based on a person's physical or mental disability
Marital status	Based on a person's marital status (e.g. married, divorced, unmarried, de facto)
Family or carer's responsibilities	Based on whether a person has family or carer obligations
Pregnancy	Based on whether a woman is pregnant or not
Religion	Based on a person's religious beliefs (e.g. Christian, Muslim, Jewish, Buddhist)
Political opinion	Based on a person's political beliefs (e.g. left-wing, right-wing)
National extraction or social origin	Based on a person's nationality or social class (e.g. their country of origin or class status)

Source 1 Types of workplace discrimination

Discrimination in the workplace

In Australia, the Australian Human Rights Commission – along with number of other state and territory agencies – deals with complaints about discrimination in the workplace. The Fair Work Ombudsman can also investigate workplace discrimination and may initiate legal proceedings. Under Australian law (according to the definition in the *Fair Work Act 2009*), two conditions must be present for discrimination to occur:

1 The person must have been disadvantaged in the workplace due to one or more of the types of discrimination defined in Source 1.

case**study**

Can employment be terminated when you are 'too old'?

A long-serving waiter at a Thai restaurant in Queensland was told by his employer that his employment would be terminated on his 65th birthday. The former waiter received a letter from the employer which stated that it was the company's policy 'that we do not employ any staff that attain the retirement age, which in your case is 65 years'.

The Fair Work Ombudsman ordered the restaurant operators to pay $29 150 for breaking the law with regard to age discrimination and not keeping proper employment records. A sum of $10 000 was also paid to the former employee.

Source 2 It is illegal to discriminate in the workplace on the basis of age.

2 The discrimination must have resulted in an action being taken that was 'adverse' (i.e. negative) to the person. Adverse actions include:
  - dismissing (i.e. firing) an employee
  - withholding legal entitlements such as pay or leave
  - making changes to the employee's job that disadvantages them
  - treating an employee differently to other employees
  - not hiring a job applicant
  - offering a potential employee the job but with different and unfair terms and conditions compared to other employees.

There are some exceptions to anti-discrimination laws. For example, a 16-year-old would not be able to be employed serving alcohol in a bar until they were 18, because of the law.

Sexual harassment in the workplace

Sexual harassment is sexual behaviour that is unwanted or unwelcome. Such behaviour could be expected to make the recipient feel offended, humiliated, ashamed or embarrassed, or intimidated and frightened. Sexual harassment is unlawful and can take place in the workplace. Examples include staring or leering, making comments or jokes that are suggestive, sending text messages or emails that are of a sexual nature, requesting sex or repeatedly asking for a date when these requests are unwanted. Sexual harassment may also include unwanted physical advances such as deliberately brushing up against someone. A complaint about sexual harassment can be made to the Human Rights Commission.

Source 3 Laura Connors from Tasmania was 15 when she started her first part-time job at a local fast food restaurant. She resigned a few months later because the restaurant owner repeatedly pinched and squeezed her bottom and had requested she take her top off. The Anti-Discrimination Tribunal of Tasmania ordered that $12 000 be paid to Laura Connors for compensation.

Check your learning 13.4

Remember and understand

1 What two conditions must be met to determine that there has been discrimination in the workplace?

2 What is the difference between sex discrimination and sexual harassment?

Apply and analyse

3 What type of discrimination has taken place in the following situations? The first answer has been done for you.
  - **a** A job advertisement for a bar attendant states that only females need apply. (Answer: sex discrimination.)
  - **b** Mia turned 17 and suddenly found many of her shifts were given to younger workers because her employer just couldn't afford to pay Mia the higher wage.
  - **c** Alice reveals at a job interview that she is due to have a baby in six months' time. The employer states that it is a 'waste of time' even continuing with the interview.
  - **d** Jeff is married and has two sons. He applies for a position to work in Antarctica for a year. The job advertisement says that those with family should not apply due to the extreme conditions and solitude.

4 Explain why the following cases could constitute sexual harassment.
  - **a** Tomo's manager wolf whistles at her as she enters the building each day. Tomo blushes and averts her gaze.
  - **b** Liliana repeatedly asks her employee Sam if he would like to join her at her beach house, despite Sam making it clear he is not interested.

Evaluate and create

5 Refer to the case study and evaluate the decision to fine the restaurant operators $29 150 for discriminating against the waiter. You can conduct some extra research on the case by looking up 'Australia's first age discrimination case' for further information.

6 Why is it important to have anti-discrimination and sexual harassment laws? Write 2–3 paragraphs outlining your views.

13.5 Protecting workers from bullying and unfair dismissal

If a person believes they have been unfairly dismissed from a job, or that they have been bullied in the workplace, they may be able have the matter referred to the Fair Work Commission.

Bullying in the workplace

Workers who believe they have been bullied may apply to the Fair Work Commission for an order to have the bullying stopped. Health and safety organisations in each state and territory may also deal with complaints about workplace bullying.

Under the *Fair Work Act 2009*, to determine that there has been workplace bullying:

1. a person or group of people must have behaved unreasonably to a worker or a group of workers at work
2. the bullying must have occurred repeatedly
3. the bullying created a health and safety risk.

There is a difference between workplace bullying and taking reasonable action to manage an employee. For example, reasonable management may entail informing the worker about their unsatisfactory work performance in an appropriate way or setting goals for the worker that will be monitored to ensure they are met.

Unfair dismissal

If you are ever dismissed, remember that Walt Disney was once sacked for not being creative enough! Being dismissed is a traumatic experience, especially if the **dismissal** is unfair. If a person thinks this is the case, they may be able have the matter referred to the Fair Work Commission. For the dismissal to be considered unfair it must be considered to be harsh, unjust or unreasonable. In determining whether the dismissal was harsh, unjust or unreasonable, the following questions should be considered (see Source 2).

case**study**

Have you ever been bullied at work?

Teenage waitress Brodie Panlock was bullied so much at work it eventually led her to take her own life in 2006. The four men responsible for bullying Brodie at Café Vamp in Hawthorn, Victoria were convicted and fined a total of $115 000. The company that runs the café were also convicted and fined $220 000 for not taking reasonable care for the health and safety of Brodie. The bullying occurred between June 2005 and September 2006 and included Brodie being spat on, having fish oil poured on her and being told she was ugly.

Brodie's case was such a serious case of workplace bullying it resulted in the Victorian Government passing legislation in 2011 to make serious bullying a crime punishable by up to 10 years in jail.

Take a stand against bullying
Brodie's Law

Source 1 Brodie Panlock's death highlighted the human cost of workplace bullying. Bullying also has an economic cost with the Productivity Commission estimating workplace bullying in Australia costs between $6 billion and $36 billion annually.

Unfair dismissal checklist	Yes	No
1 Was there a valid reason for the dismissal? The dismissal might have been related to a person's capacity to do their job, or their conduct and its effect on safety and welfare of other employees.		
2 Was the person notified of the reason for their dismissal?		
3 Was the person given an opportunity to respond to any reason for the dismissal that related to their capacity or conduct?		
4 Did the employer unreasonably refuse to allow the employer to have a support person present to assist at any discussions relating to dismissal?		
5 If the dismissal was related to unsatisfactory performance, had the person been warned about that unsatisfactory performance before the dismissal?		
6 Did the size of the employer's enterprise impact on the procedures followed when dismissing the person?		
7 Did the absence of dedicated human resource management specialists or someone who had expertise in the enterprise have an impact on the procedures followed in dismissing the person?		
8 Are there any other matters that are relevant to this dismissal?		

Source 2 The Fair Work Comission considers these questions to determine whether dismissal was unfair.

Sometimes employers must make what is known as a **summary dismissal**. This means that the employer dismisses the employee without notice or warning because they believe on reasonable grounds that the employee's conduct is sufficiently serious to justify immediate dismissal. Examples of serious misconduct include theft, fraud, violence and not following important health and safety procedures.

A Linfox truck driver was dismissed for making comments about his managers on Facebook. The truck driver had not intended for the comments to be seen by members of the public, and **Fair Work Australia** (now the Fair Work Commission), ordered the dismissal was unfair. In handing down the decision, however, Fair Work Australia warned that employees should be extremely careful about making comments about managers and colleagues on social media.

Source 3 Employees should be extremely careful abvout making comments about managers and colleagues on social media.

Check your learning 13.5

Remember and understand

1 Name two strategies that are considered 'reasonable management' by an employer.

2 What three factors determine whether a dismissal is unreasonable or not?

Apply and analyse

3 Why must an employer state the reason or reasons for dismissing an employee?

4 A manager points out that an employee has made an error and suggests that further training is required. Has workplace bullying taken place?

5 Are either of the following reasons for dismissing an employee 'harsh, unjust or unreasonable'?

- **a** Jan is late for work on one occasion and her employer tells her to pack her bags and go.
- **b** A customer complains about coffee being too cold. The employee throws the coffee at the customer and says, 'Now you have something to complain about!'.

Evaluate and create

6 Do you think it is fair that employers are responsible for the behaviour of their employees at work? Discuss in groups of 2–3, justifying your opinions and giving examples to illustrate your point.

13B rich task

Unfair dismissal

An employer should have a thorough knowledge of unfair dismissal laws before dismissing a worker. As discussed in the previous section, for dismissal to be considered unfair it must be considered to be harsh, unjust or unreasonable.

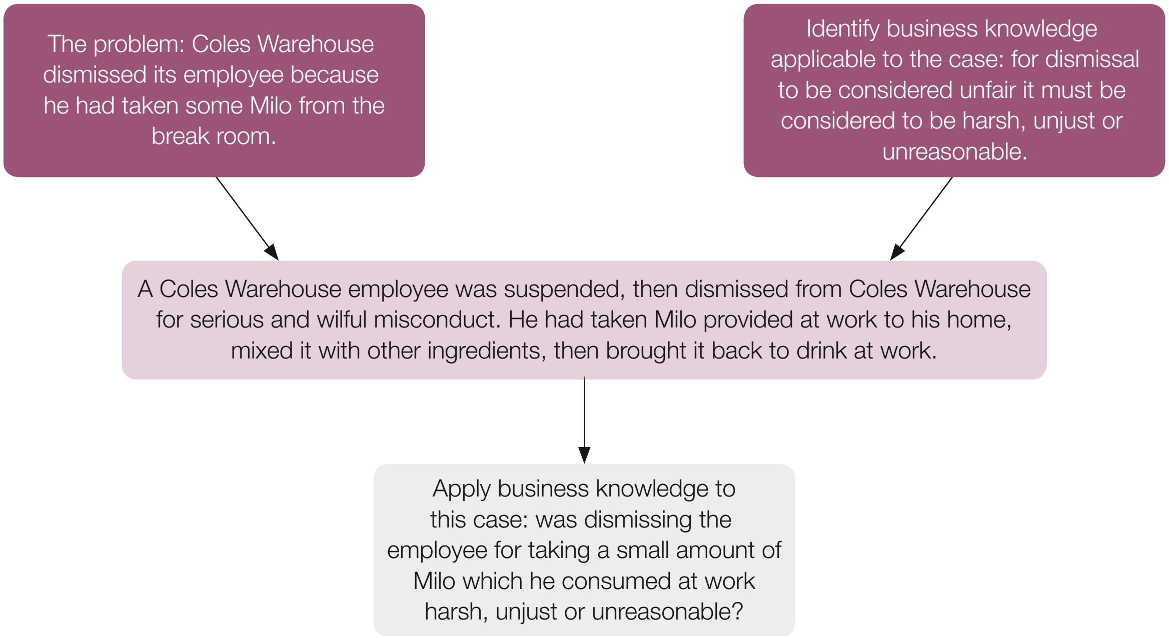
When dealing with unfair dismissal cases, both the employer and employee are encouraged to find a solution to the matter themselves. Sometimes, however, the Fair Work Commission must make a decision about whether an employee has been unfairly dismissed. The following two cases highlight the complexity involved in many unfair dismissal cases.

The Milo case

In the case *Homes v Coles Group Limited* [2014] FWC 1013, a Coles employee took some Milo and was dismissed. Coles provided Milo for their staff to drink on a tea break. One employee preferred to drink Milo mixed with his own drinking chocolate, coffee and raw sugar. He would regularly take home some Milo from work in a container to mix it with other ingredients.

Source 1 An employee who took some Milo home in a container was dismissed.

In August 2013, a security officer found Milo in the worker's bag but the worker claimed the Milo was his (supposedly because he was in a state of shock). The employee was first suspended from Coles Warehouse while further investigation took place. After the employee was interviewed about the matter, 11 days later he was dismissed for serious and wilful misconduct because he had taken the Milo and lied about it. The Commission found that the employee was unfairly dismissed. The employee was reinstated and was also paid for the period between the dismissal and reinstatement.



The problem: Coles Warehouse dismissed its employee because he had taken some Milo from the break room.

Identify business knowledge applicable to the case: for dismissal to be considered unfair it must be considered to be harsh, unjust or unreasonable.

A Coles Warehouse employee was suspended, then dismissed from Coles Warehouse for serious and wilful misconduct. He had taken Milo provided at work to his home, mixed it with other ingredients, then brought it back to drink at work.

Apply business knowledge to this case: was dismissing the employee for taking a small amount of Milo which he consumed at work harsh, unjust or unreasonable?

Source 2 This diagram shows how knowledge of unfair dismissal can be applied to the facts in the Milo case.

The swearing case

In the case *RM v SCT Pty Limited T/A Sydney City Toyota* [2013] FWC 1077, a car sales executive working for Sydney City Toyota was summarily dismissed after swearing at a customer. It was the salesman's specific duty to assist government customers in relation to the sale of Toyota cars. The salesman was annoyed that the customer had given the sale to another Toyota car dealership and a couple of months later spoke to the customer about it. Despite initially denying he had sworn at the customer, the salesman later conceded in cross-examination that the following conversation had taken place in the reception area:

> Salesman: I thought that we were going to get the order for that one.
>
> Customer: I don't know what happened. We got it at Chatswood.
>
> Salesman: Well I guess that means that you wasted my ******* time.

An independent witness stated the salesman's behaviour was 'pretty aggressive'. A day after the incident, the car salesman was asked to attend a meeting to discuss allegations about his conduct and its impact on the businesses reputation. He was asked if he would like to bring another person along to the meeting for support and was assured that if he needed more time the meeting could be rescheduled. At the meeting, the car salesman was given the opportunity to respond to the allegations. Shortly after the meeting, the salesman was given a termination letter which said his conduct 'caused an imminent risk to the reputation and profitability of Sydney City Toyota'.

skill**drill**

Applying business knowledge, skills and concepts to new situations

Being able to apply knowledge to solve issues or problems is a skill many employers seek. Knowing the steps involved in applying knowledge to solve issues or problems allows the problem to be solved quickly, and often makes the outcome fairer.

Step 1 Explain the main problem or issue in one sentence.

Step 2 Identify the main facts surrounding the specific issue or problem – this may involve stating clearly what happened, who did what, who said what, and when it happened.

Step 3 State clearly the business knowledge applicable to the general issue or problem. Divorce yourself from the specific problem and think more broadly. For example, if someone has broken the law, look specifically at what constitutes breaking the law and not whether the law was broken.

Step 4 Turn the general business knowledge you have gained on the issue/problem (in Step 3) into a series of general questions. Going back to our problem of breaking the law, the question might be 'What constitutes breaking the law?' You might need to write the answer down.

Step 5 Refer to the specific issue or problem and ask yourself the same questions you posed in Step 4 but this time answer those questions in relation to the specific issue or problem.

Apply the skill

Read the swearing case, and then determine whether the employee was unfairly dismissed by following the five steps outlined above.

Extend your understanding

Now that you have applied your business knowledge to the offensive swearing case, read the outcome of the case. Enter the name of the case into a search engine: *RM v SCT Pty Limited T/A Sydney City Toyota* [2013] FWC 1077. Compare your decision about the case with the Fair Work Commission's decision.

part 4

House of Representatives
GREEN
BALLO
Ballot box

civics and citizenship

Concepts and skills

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Concepts and skills

The civics and citizenship toolkit

A **citizen** is a person who legally lives in a geographical area such as a town or country. Being a citizen is like having a membership where you belong to a community and have certain rights and responsibilities. In Australia, citizens have the right to vote for members of **parliament** to represent their views. They have the right to go to school and work and speak freely about the issues concerning them. Australian citizens also have responsibilities to abide by the **laws** of the nation. **Civics** and **citizenship** is the study of these rights and responsibilities and how the **government** works.

Understanding how the **political system** works gives us an insight into how our vote can impact the future of our country and the global community. Knowledge of some democratic values, such as freedom of movement and the right to a fair **trial**, provides reassurance that we have a political and legal system that respects the rights of citizens.

14A

What are civics and citizenship concepts?

14B

What are civics and citizenship skills?

Source 1 Parliament House in Canberra is the meeting place of the elected Parliament of Australia.

14C

What career opportunities are there within the field of civics and citizenship?

14.1 Civics and citizenship concepts

Civics and citizenship students can examine a wide range of concepts to help them understand the workings of Australia's political and legal systems. These concepts may be examined together or as separate ideas. As you examine each of these key concepts you will begin to develop knowledge which will enable you to become a more active citizen.

The six key concepts of civics and citizenship are:

- **democracy**
- **democratic values**
- the **Westminster system**
- **justice**
- **participation**
- **rights** and **responsibilities.**

Democracy

A democracy is a system of government in which the people have the power to determine how they will be ruled or managed. In most democratic societies, citizens are involved electing parliamentarians to represent their views. Parliamentarians or representatives of the people then make laws on behalf of the people who have elected them.

The concept of democracy has been around for a long time, with many civilisations and societies throughout history. The term democracy comes from the Greek words *demos* (meaning 'citizen') and *kratos* (meaning 'rule'). The people of ancient Greece practised what is known as a direct democracy. A **direct democracy** involves citizens meeting together to make laws for their society.

Today, most democratic societies such as Australia are **representative democracies**. This means we elect representatives to make laws on our behalf. In Australia, citizens over the age of 18 are required to vote for candidates in elections for federal, state and local government. Our system of voting is compulsory, unlike other democracies such as the United Kingdom or the United States where participating in elections is optional.

Source 1 The Australian House of Representatives is the upper house of federal parliament. It is made up of the people who have been elected to represent us.

Democratic values

Democratic values are the beliefs and ideals that are held by our society as a democracy. Such values include respect, equality, fairness and freedom (see Source 2). It is important to understand democratic values when examining Australia's political system. By understanding democratic values and their purpose, we can assess if a government is operating as a true democracy.

Democratic value	Definition
Respect	Treating others with consideration and valuing their views, beliefs and rights.
Equality	Rights and privileges for all, without discrimination based on gender, race, religion, age, sexual orientation or level of education. All citizens have the right to the same opportunities.
Fairness	All people are treated fairly, or without injustice, and are given equal opportunity. Also known as a 'fair go' in Australia.
Freedom	Rights, privileges and responsibilities for all without interference, or control from other citizens or government.

Source 2 Democratic values

The concept of fairness is a particularly valuable democratic value in many democracies such as Australia. The right to a fair trial is one example where we strive to achieve the democratic value of fairness. If a person is accused of a crime in Australia, they have the right to be given a fair trial in which a prosecutor presents evidence to the court to prove their guilt; an accused person does not have to prove their innocence. Accused persons also have the right to have a legal representative or lawyer present a case in their defence. Trials are overseen by independent judges who ensure that all parties before the court are given a fair and unbiased hearing and an equal opportunity to present their case. Being given a fair trial also means that an accused person should not be discriminated against, that is, their gender, race, religion, age or even past offences should not interfere with the way they are treated or the outcome of the trial.

The Westminster system

Australia's system of government is based on the Westminster system. The Westminster system is a form of parliamentary government originating in the United Kingdom. It is named after the area of London where the British parliament is located (see Source 3). The Westminster system has been adopted by a number of countries including Canada and New Zealand. It includes the following features:

- a parliament, consisting of two chambers or houses, that is elected by the people to make laws on their behalf. Citizens vote for members of the parliament in free and fair elections and all laws must be passed by a majority (over half) of the representatives in both houses.
- a sovereign (such as a king, queen or governor-general) to act as the Head of State and hold various powers including being required to give final approval to all laws made by the parliament. The sovereign or Crown also has an important ceremonial role, including representing the country at national and international events.

In Australia, both our federal and state governments are modelled on the Westminster system.

Source 3 The Palace of Westminster in London is where the two houses of the parliament of the United Kingdom sit. The English parliamentary system is similar to our own.

Justice

The concept of justice can have many different definitions. The idea of justice can mean different things to different people depending on their nationality, culture and values. For some it might mean seeking revenge or payback, while for others it might mean fairness. However, the concept of justice in Australia ultimately means that people should treat each other in a manner that is fair and balanced for all.

Our legal system has strong ties with the concept of justice. In fact, it is sometimes referred to as the **justice system**. In Australia, when people break the law and are convicted by the courts it is said that they have been 'brought to justice'.

As we will continue to learn through years 9 and 10, the key features of the Western Australian legal system and the Australian legal system are designed to deliver justice to all. Through its key principles and procedures (such as the right to a fair trial, legal representation, unbiased juries and the burden of proof), the legal system encourages the delivery of justice to all citizens, whether they be guilty or innocent. Our laws and rights are also written and enforced so that we can enjoy a fair and just society.

The judicial or court system aims to publicly deliver justice so that those who commit crimes are publicly called to account for their actions and punished for breaking the law. This acts as a deterrent to others who might break the law and also serves to keep the community safe from those who would harm us.

SUPREME COURT
OF
WESTERN AUSTRALIA

Source 4 Australia's legal system is designed to serve justice to citizens.

Participation

The concept of participation is an important part of living in a democracy. It refers to the way good citizens contribute or take part in society. In Australia, we participate in society through activities such as voting in an election or referendum, serving on a jury or paying taxes. Citizens who participate in this way reap the rewards of living in a society where elected members of parliament seek to represent their views, those who break the law are treated fairly, and the services that we can all use, such as schools and roads, are provided.

One of the most important ways we can participate in a democracy is by voting in an election. By voting for the issues that are important to us, we have the power to influence the way our country is run.

Government can also give citizens the opportunity to participate in important decisions outside of elections and referendums.

As a part of democratic societies, participation is important in giving citizens a sense of ownership or accountability in the running of society.

Rights and responsibilities

The concept of rights and responsibilities refers to our entitlements and duties as citizens. The rights and responsibilities we experience in Australia are an important part of living in a democracy. Our rights ensure we are able to have a say in the way our country is run and are treated fairly in the process. On the other hand, our civic responsibilities ensure we contribute to our society in order to keep it going as a strong democracy. A list of some of these rights and responsibilities is shown in Source 6.

In the United States, the rights of the citizens are protected by their Bill of Rights. This Bill, made up of the first 10 amendments to the Constitution of the US, makes sure the freedoms of US citizens are protected, including the freedom of speech and the freedom to assemble or gather in protest. In Australia, we do not have a national Bill of Rights that officially protects our rights. Rather, our constitution says we have a number of rights (see Source 6) including the right to vote. In Australia, we have no official protection for our right to freedom of speech; however, the democratic values held by our society ensure that this privilege is rarely prevented.

Rights	Responsibilities
The right to vote	Voting in elections
Protection against acquisition of property on unjust terms	Jury service
The right to trial by jury	Paying taxes
The right to freedom of religion	Obeying the law
Protection against discrimination	

Source 6 The rights and responsibilities of Australian citizens

Source 5 We participate in the running of society by voting in elections.

DIFFERENCES MAKE LIFE FUN!
TREAT OTHERS WITH RESPECT!

Check your learning 14.1

Remember and understand

1 What is a democracy?
2 What kind of democracy is Australia?
3 Name and describe two democratic values.
4 What is justice?
5 What rights do we have in Australia that are protected by our constitution?

Apply and analyse

6 Why is it important for citizens to participate in a democracy?
7 What other values do you think are important to our democratic society?

Evaluate and create

8 Research the government of another democratic society (such as New Zealand, Canada or Japan). How is its form of government similar to or different from Australia’s form of government? Present your findings as a poster or audiovisual presentation.
9 Consider this statement: ‘Australia should have its own national Bill of Rights.’ Using the Internet to conduct research, develop an argument both for and against this statement.

14.2 Civics and citizenship skills

Civics and citizenship studies help us learn to question, interpret information and argue our point of view. The classroom is a forum for you to share your opinions and see things from a wider range of perspectives when examining topics such as compulsory voting, the right to a fair trial and Australia's treatment of **asylum seekers**.

Studying civics and citizenship requires you to analyse information and ask a range of questions to find out more about a topic. You learn to question and research information by asking what, why, when, who and how to uncover the truth about an issue. Through investigating an issue you will be able to arrive at your own viewpoint while understanding the reasons why others may have different points of views.

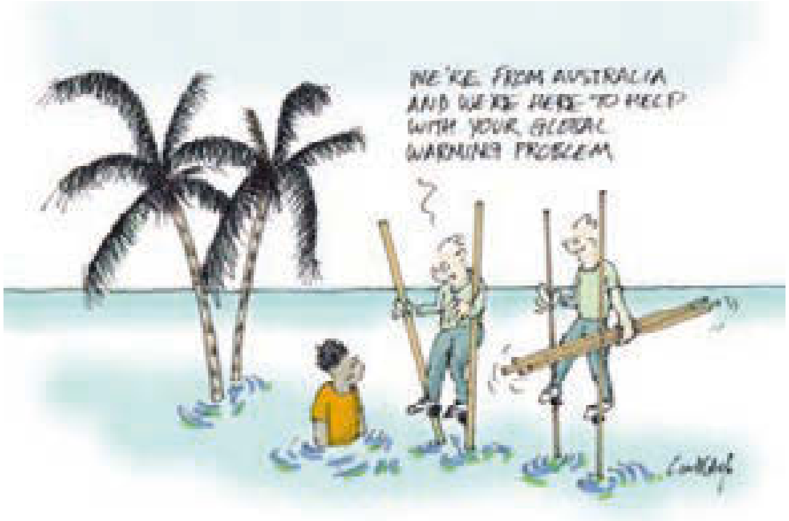
Questioning and research	• Identify current personal knowledge, gaps, misconceptions, currency of information, personal perspective and possible perspectives of others • Construct, select and evaluate a range of questions and hypotheses involving cause and effect, patterns and trends, and different perspectives • Analyse and clarify the purpose of an inquiry using appropriate methodologies, ethical protocols and concepts to plan for, and inform, an investigation • Use a range of methods to collect, select, record and organise relevant and reliable information and/or data from multiple sources that reflects the type of analysis of information that is needed (e.g. questionnaires, surveys, emails, tables, field sketches, annotated diagrams), with and without the use of digital and spatial technologies • Identify the origin, purpose and context of primary sources and/or secondary sources • Use appropriate ethical protocols, including specific formats for acknowledging other people's information, and understand that these formats vary between organisations
Analysing	• Use criteria to analyse the reliability, bias, usefulness and currency of primary sources and/or secondary sources • Analyse information and/or data in different formats (e.g. to explain cause-and-effect relationships, comparisons, categories and subcategories, change over time) • Account for different interpretations and points of view/perspectives in information and/or data (e.g. from tables, statistics, graphs, models, cartoons, maps, timelines, newspapers) • Analyse the 'big picture' (e.g. put information and/or data into different contexts, reconstruct information by identifying new relationships, identify missing viewpoints or gaps in knowledge) • Apply subject-specific skills and concepts in familiar, new and hypothetical situations
Evaluating	• Draw evidence-based conclusions by evaluating information and/or data, taking into account ambiguities and multiple perspectives; to negotiate and resolve contentious issues; to propose individual and collective action in response to contemporary events, challenges, developments, issues, problems and/or phenomena • Critically evaluate information and/or data and ideas from a range of sources to make generalisations and inferences; propose explanations for patterns, trends, relationships and anomalies; predict outcomes
Communicating and reflecting	• Select a range of appropriate formats based on their effectiveness to suit audience and purpose, using relevant digital technologies as appropriate • Develop texts, particularly explanations and discussions, using evidence from a range of sources to support conclusions and/or arguments • Deconstruct and reconstruct the collected information and/or data into a form that identifies the relationship between the information and the hypothesis, using subject-specific conventions, terminology and concepts • Compare evidence to substantiate judgements (e.g. use information and/or data from different places or times; use tables, graphs, models, theories) • Generate a range of viable options in response to an issue or event to recommend and justify a course of action, and predict the potential consequences of the proposed action • Reflect on why all findings are tentative (e.g. changing nature of knowledge, changes in circumstances or values)

Source 1 The four categories of skills used in civics and citizenship inquiries

14.3 Questioning and research

Developing questions

Active citizens ask lots of questions. Often they don't believe everything they read and they seek to detect the motivation behind why someone takes a certain point of view or acts in a certain way. For example, when they see politicians talking in the media they listen to their arguments and seek out differing points of view. They also check facts and look at the arguments for and against a certain issue before reaching their own conclusions. When active and informed citizens state their own viewpoint, they support this with evidence such as statistics, cases from the past, quotes from relevant sources and sound reasoning.


WE'RE FROM AUSTRALIA AND WE'RE HERE TO HELP WITH YOUR GLOBAL WARMING PROBLEM
Cathy

Source 1 Cartoonists present their viewpoints on current issues using images and humour.

skill**drill**

Developing civics and citizenship questions

Source 1 is a political cartoon about Australia's response to global warming. Protection of the environment and what our lawmakers and citizens are going to do in the future to conserve the environment are important issues at home and abroad. You can learn to investigate a civics and citizenship issue such as this by starting your questions with the words 'what', 'where', 'how', 'why', 'what impact' or 'what should'. When examining a source, whether it is a cartoon, video footage, a newspaper article or election slogan, the following approach may be helpful:

Step 1 Brainstorm a list of questions and then try to answer them. Some questions, such as 'What is happening?', might be easily answered, whereas other questions, such as 'Why is it happening?', might need further research.

Step 2 Look at the source itself to try to understand the context. The 'who' question is important here. 'Who is saying this?' can be just as important as 'What is being said?' Identifying where the source comes from can alert you to whether the truth of their statements should be examined more carefully.

Step 3 The 'how' question is also important. You might ask, 'How is this happening?' or 'How does this source affect me?' Are there any emotions such as fear, persuasion or humour that are being used to influence your judgement?

Apply the skill

1 Where could you look to find answers to the question 'What are the impacts of global warming?'

2 Why is it important to know the author of the source when discovering the truth about an issue?

3 Why is examining how the source affects you sometimes more important than basic descriptive questions such as 'What is happening'?

4 What tactics have been used to convey the cartoonist's message about the future of the planet due to global warming in Source 1?

Identifying sources and reference as appropriate

Sources provide information for informed citizens. They can take many different forms, from written records in books or online to live interactions that may be captured by varying forms of media. Some examples of sources include case transcripts and judgments, newspaper articles, letters, tweets, blogs or Facebook posts, cartoons, diaries, interviews and live debates.

In your research you may collect information from **primary sources** (sources from the time or event being investigated) such as photographs, letters, film, diary entries or official documents such as laws. Or you may gather information from **secondary sources** (sources about the time or event being investigated) such as newspaper articles, census data or websites. When using these sources, it is important to be able to distinguish between them and to know where, when and who the source came from.

Locating a range of relevant sources usually involves a number of different search methods, such as:

- using online search engines such as Google
- visiting government websites
- looking at newspaper and magazine articles online
- contacting local members of parliament or asking a person with expertise in the subject
- interviewing class members or family members to gain an insight into their views on a particular issue.

Source 2 You need to ensure that sources of information gathered online are accurate and reliable.

A lot of research today is conducted online. In order to ensure that sources gathered online are accurate, reliable and relevant, a number of guidelines should be followed:

- Search engines such as Google are useful research tools, but much of the material on these sites is not reliable and may contain inaccuracies, misleading information or material that is out of date. When using search engines, be sure to define your search using keywords.
- A reliable way of searching for sources is to use sites linked to educational institutions, government departments, reputable companies and universities. A quick way of telling if a site is reputable is to look at the domain name in the URL (Internet address).
- Avoid blogs posted by unknown individuals. If you happen to find information relevant to your investigation on a blog or social media site, always verify it by using a more reliable source.
- Never cut and paste information from the Internet straight into your own work. Taking someone else's work, ideas or words and using them as if they were your own is called plagiarism and can result in very serious consequences.

The ethics of research

When gathering information, it is important to follow ethical protocols to use this information appropriately. This might include:

- informed consent – getting permission from someone to use information about them
- citation – giving credit to the right person if you quote them or use information they have collected
- integrity of data – making sure your data is accurate and not made up
- confidentiality – protecting people's personal information if they do not wish you to use it.

Check your learning 14.3

Remember and understand

1 Why is it important for citizens to ask questions?

2 What can citizens use as a reliable source of information?

3 What is plagiarism?

Apply and analyse

4 Kim wants to know why housing is so expensive in Australia. Where might she go to find the answer to a question like this?

5 Katie has noticed that a local swimming pool has been closed for a long time. Despite a local politician promising to reopen the pool, nothing has happened. Suggest three questions Katie might ask about this as an active citizen.

14.4 Analysing

The reliability of sources

All sources are affected by the author's own attitudes or beliefs. In some cases, the author may have been paid or forced to write in a particular way or to ignore important facts from an event or story. This is referred to as a bias and is often aimed at persuading a reader or viewer to agree with the person who created the source. In politics, and therefore in the study of civics and citizenship, people often write or speak about issues from their own perspective. This is why we must carefully evaluate and analyse sources when we are drawing conclusions from them.

CUT CARBON POLLUTION,
UNLOCK
CLEAN
ENERGY
SAY YES TO CLIMATE ACTION

Source 1 Sources are influenced by the author's attitudes and beliefs.

skill**drill**

Identify and describe points of view, attitudes and values in sources

A person's perspective is their point of view – the position from which they see and understand events going on in the world around them. The more controversial an issue is, the more likely that there will be strong, competing points of view. Controversial civics and citizenship issues include:

- Australia becoming a **republic**
- Australia's treatment of asylum seekers
- the treatment of Indigenous Australians
- retaining the **jury** system
- **policy** on climate change
- foreign investment in Australia.

Step 1 Identify a controversial issue. You can choose one of the issues listed or choose a more localised issue such as the use of mobile phones at school or your school's efforts to protect the environment.

Step 2 List those affected by the issue.

Step 3 Locate sources depicting each point of view.

Step 4 For each point of view, describe the point of view being expressed. Why is the view being expressed? Who is expressing it? What are they saying?

Step 5 What affects this person's point of view? Think about the person's role, personal experience, whether they stand to benefit financially and their ability to tolerate difference in others.

Apply the skill

1 Use the steps above to look closely at another controversial issue of your choice. You can choose one of the issues listed or a more localised issue such as the use of recycled goods at school or your school's efforts to provide healthy food and drink options at the canteen.

A useful source is one that will add to your understanding of a civics and citizenship inquiry.

The source needs to be relevant to the topic or question asked and must also be reliable. The following are good questions to ask in order to determine the usefulness of a source:

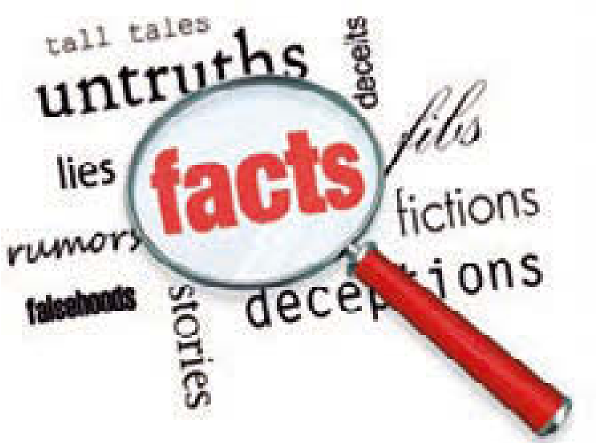
- Is it a reliable source?
- Is there enough information and sufficient detail to help me answer the inquiry question?
- Does the information support and reinforce evidence from other sources?
- Is it balanced or does it present one point of view (bias)?
- Is it based on fact or opinion?
- Is the information current?

Separating fact from opinion

The conclusions you draw about the sources you have found will determine their usefulness. In many cases, this means separating fact from opinion. A fact is something that can be proved: when an event took place, what happened and who was involved. An opinion is based on what a person, or persons, may believe to be true. A simple way to detect whether a statement is fact or opinion is to look closely at the language used. The use of words such as 'might', 'could', 'believe', 'think' and 'suggests' all indicate that an opinion is being expressed. For example:

- Fact: Australia has compulsory voting.
- Opinion: Australia is a **democracy** so citizens should have the right to choose if they want to vote in an election rather than be told they have to by law.

Perspective and bias are not just limited to the people who create source material. Interpretations of sources can also vary widely from person to person. Age, gender, social position, beliefs and values can affect perspective.



Source 2 Separating fact from fiction in civics and citizenship is an important skill.

Analysing information

Part of studying civics and citizenship is developing the ability to analyse information or data in different formats. Data can be presented in all sorts of ways, such as tables, graphs, cartoons, newspaper articles or blogs. It is important to be able to examine these sources and compare them. This might involve examining their similarities and differences to help you answer your research question.

It might also involve identifying **cause-and-effect relationships**, when one circumstance results in another circumstance. For example, Source 1 on page 427 shows a cartoon on global warming. Analysing this cartoon might help you to identify global warming as a cause and rising sea levels as an effect.

Check your learning 14.4

Remember and understand

1 What is bias?
2 What is the difference between a fact and an opinion?
3 Name five factors that might influence a person's perspective?
4 What is a cause-and-effect relationship?

Apply and analyse

5 Jorge is researching the political issue of whether or not Australia should accept more refugees. He has found several sources of information. Which of the following should Jorge think of as reliable? Provide a reason for your decision.
   a a blog called 'Get your own country'
   b a report released by the Australian Bureau of Statistics
   c the United Nations official website
   d an article from *The Australian* newspaper
6 Identify whether the below statement is fact or opinion and explain why.

> Asylum seekers and refugees might be happier if the facilities they stayed in were in better condition.

14.5 Evaluating

Evaluating information, perspectives and contentious issues

Once you have collected and analysed the information you need, you can draw on your evidence to come up with an answer, or conclusion, to your question. In order to come to a fair conclusion, it is important to take into account any perspectives, uncertainties or contentious issues that could disrupt your evaluation

There's an old saying that before you criticise a person you should walk a mile in their shoes. In civics and citizenship it is important to understand not only what opinion is being expressed but why it is being expressed. It is useful to consider why a person may have a certain point of view. For example, the family of a victim of crime may say to the media that a sentence given to a criminal was insufficient and unjust. This may be true, but it's important to consider how the harm or loss of a family member due to crime may influence opinion. Listening and being respectful of opinions that may be different from our own is an important skill to practise in civics and citizenship so that we can discuss issues rationally with others. If we are unable to listen or do not try to understand other people's perspectives, we can create conflict. When issues have clear sides or perspectives, it can be better to hold open discussions to address people's ideas or to negotiate a middle ground, rather than just escalating the issue by fighting.

Proposing a plan of action

Once you have come to a conclusion, you must decide on a course of action. Imagine that your research question asked if there were enough places to sit outside in your school yard. You surveyed people, compared the landscape with other schools in your area, and have come to the conclusion that there are not enough. What do you do now?

You could decide to do nothing if the problem isn't that bad, or you can decide to propose action. This action might include writing to your principal or school council. Or, with the permission of your teachers, you might raise money yourselves to pay for more benches around the school.

It is possible to take action as an individual or as a group. Sometimes trying to get things done by yourself can be a lot of work, and help from a team is useful. If you are going to propose action as a group, or collective, you will need to follow a more democratic process.

A democratic process is one in which everyone has an opportunity to have their say. This might include giving all members of a group the opportunity to contribute to a discussion, ensuring that information is conveyed to all group members, providing group members with adequate time and opportunity to respond and vote on an issue.

Source 1 One way to reach a decision that reflects the majority view is to take a vote.

Check your learning 14.5

Remember and understand

1. Why is it important to recognise multiple perspectives on an issue?
2. Describe a democratic process. Why is it a good way to make decisions?

Apply and analyse

3. A PE teacher gives a class the chance to choose what sport they will all play during a double period. The class disagrees about whether or not they should play basketball or soccer. How could this problem be solved?
4. Amy and Tui are arguing about whether or not funding from the local council should go to the kindergarten or the cricket club. After only minutes of discussion, their arguments begin to get personal and offensive. Suggest how they could handle this situation better.

14.6 Communicating and reflecting

Terminology for civics and citizenship

Just like in mathematics, a common language is used in civics and citizenship. Source 1 lists and defines some commonly used terms in civics and citizenship; additional civics and citizenship terms can also be found in the glossary at the end of this book.

Communicating your findings

After you have come to your conclusion and decided on a course of action, it is time to communicate your findings. There are many ways you can let people know about your evidence, conclusions and proposal for action, including audiovisual presentations (using software such as PowerPoint or Prezi), posters, reports, blogs or letters to someone who can help you take action (such as your teacher or local council).

Whichever format you decide to use, it is good to include the following:

- An introduction – let people know what your questions was, why you asked that question and why it is important. This is also a good time to define any key terms you are using.
- An explanation of what research you did – why did you use those sources?
- An explanation of your results – you might like to present your results as graphs, tables or photographs to make it easier for your audience to understand.
- A conclusion – what were your findings? Explain why you came to that conclusion by evaluating your results.
- A proposal for action – what needs to be done now? How can your audience get involved? Predict the consequences of your proposal for action.

Reflecting on our role as citizens

Many Australian citizens go beyond the legal responsibilities they have as citizens because they care about the community they live in and believe they have a social responsibility to make it a better place.

Local citizens

At the local level, a citizen may give their time or resources to help others in need such as by giving to a local charity or helping at the local school fete. Lucas Patchett and Nicholas Marchesi are Young Australian volunteers and school friends who decided to set up a mobile laundry service for the homeless in their local community. Lucas and Nicholas are examples of local

citizen	A citizen is a person who legally lives in a geographical area such as a town or country.
citizenship	A person's status as a citizen. In a wider context, citizenship encompasses the rights and responsibilities that citizens exercise.
civics	The study of the rights and responsibilities of citizens and how government works.
diversity	Having many different forms. When referring to people it means that people come from different racial, ethnic, socio-economic, geographical, educational or professional backgrounds.
globalisation	The process that involves all the countries of the world being linked together, resulting in an exchange of views, ideas, products and culture.
government	The elected members of parliament who make decisions for a nation or state. The government is made up of the party or **coalition** that has won a majority of seats in the **lower house** of parliament. The lower house of federal parliament is the **House of Representatives**. The lower house of the Western Australian state parliament is the Legislative Assembly.
parliament	The national or state law-making body that is made up of elected representatives in both the upper and lower house with a head of state. In Australia the national parliament is referred to as the Commonwealth or federal parliament.
parliamentary democracy	A system of government where people elect representatives to parliament in order to make laws that reflect the majority of voters' views.
pluralist society	A diverse society where there is tolerance of different beliefs.

Source 1 Some useful civics and citizenship terms

citizens. There are now nine services across Australia providing the 'Orange Sky' laundry experience where the homeless can talk to someone while their washing is being cleaned (Source 2).

Source 2 Lucas Patchett and Nicholas Marchesi serve their local community through their mobile laundry service for the homeless.

Regional citizens

A regional citizen may often work at a national level to provide a better future for all Australians. One of the most common ways for regional citizens to achieve this is by supporting a charity or cause. Rosie Batty is an example of an Australian citizen who has campaigned to stop domestic violence in Australia after her own son, Luke, was murdered by his father.

Source 3 In 2015, Rosie Batty was appointed Australian of the Year for her work in educating people about the impact of domestic violence and her involvement in establishing the Royal Commission into Family Violence in Victoria.

Global citizens

A citizen may also act on a global level to make the world a better place to live in. The late Fred Hollows is an example of a **global citizen** who used his skills to restore eyesight to thousands of people in Australia and in many other countries around the world.

Source 4 Fred Hollows is known for working with people around the world to restore the eyesight of those who could not access corrective surgery otherwise.

Check your learning 14.6

Remember and understand

1 Use your own words to define the following terms:
  a civics
  b citizenship.
2 Why might someone contribute to society, beyond their usual responsibility as a citizen?

Apply and analyse

3 Suggest three ways you could present your findings to the following people:
  a your class
  b your principal
  c your local MP.

14.7 Careers in civics and citizenship

There are a range of career paths that can lead from studying civics and citizenship. People who are interested in politics, law and citizenship might be interested in a number of rewarding jobs that involve our legal and political systems.

While we will all be impacted by civics and citizenship throughout our lives, people can specialise in particular aspects of the field. Some of the many career options are listed in Source 1.

It is not just for our careers that studying civics and citizenship is important. By developing our knowledge and understanding of the way our government works we will be able to actively participate in the legal and political systems. From voting in elections to serving on juries, protesting political decisions and paying taxes, the knowledge of what happens in government and why will serve us well in preparing us for the future.

Career	Description
Solicitor	A lawyer who prepares cases and advises clients on legal matters
Barrister	A lawyer who can represent (or advocate for) a client in court or privately in negotiations or mediation
Judge	A legal professional who presides over court hearings or trials
Diplomat	A person who represents a country's government overseas
Politician	A person who is, or aspires to be, elected to government and represent the interests of citizens
Campaign manger	A person who organises the activities of an election campaign on behalf of a political candidate
Political adviser	A person, usually an expert in a particular subject, who can give advice to elected representatives on political issues
Political reporter	A journalist who reports on political or legal events and news; this usually requires a good understanding of the political and legal systems
ASIO officer	A person who works on behalf of the Australian Security Intelligence Organisation to assist the Australian government identify, investigate or control threats to Australia's security
Paralegal	A person who assists a lawyer to represent or advise clients
Mediator	A person who acts as an independent third party to assist people or groups in dispute to negotiate and reach a decision about their dispute
Police officer	A person who prevents or detects crime, enforces the law and ensures society maintains order

Source 1 Careers in civics and citizenship

Career profile: Ryan Wu – criminal defence lawyer

Ryan Wu works for a law firm in Perth that specialises in defending people from criminal charges. Ryan's work in criminal law means that he works with a team of other barristers and paralegals to defend the innocence of a diverse range of clients who have been accused of a crime.

In a recent case, Ryan was defending a man who had been accused of larceny (theft of personal property) at a pub in Northbridge. Ryan worked with his legal team to find and subpoena (get a legal order to obtain) the footage from a security camera at the pub. The footage showed that their client had not stolen anything on the night in question and, as a result, Ryan was able to convince the court that there was no evidence against his client and so police withdrew their charges.

Ryan's favourite thing about working as a criminal defence lawyer is 'the satisfaction of helping innocent people'.

Originally, Ryan wanted to specialise in human rights law because he wanted to help people. However, while studying law at the University of Western Australia he discovered he had a strong interest in criminal law, and could still help people in this specialty. Ryan also studied for a semester in London as part of his degree, where he said he 'learned that there is so much more to law than just being in a courtroom'.

Ryan's career in the justice system has been a lot of hard work but a very rewarding experience. Ryan believes more students should go on to study civics and citizenship in Years 11 and 12 as it doesn't just lead to a career in the legal system. 'There are so many opportunities that come from knowing about the legal system and how the government works.'

Source 2 Ryan Wu works as a criminal defence lawyer in Perth.

Our democratic rights

Government, democracy and the citizen

Bride-to-be Ruby Gamble takes her democratic right to vote seriously, as she arrives at a polling booth before her wedding ceremony. Ruby is one of approximately 16 million Australians who are enrolled to vote in a federal election. During the last federal election there were more than 7000 polling places set up around the country from Cape York, the northern-most tip of Australia, to South East Cape in Tasmania.

For many Australians, voting is more than just a legal requirement they must fulfill. The right to vote is one of our democratic rights as it provides the opportunity to 'have a say' in who will best manage Australia in the future and represent our view in the national **parliament**.

15A

What factors influence Australia's political system?

1. Would you ever consider becoming a member of parliament? Why do you think people enter politics?
2. How do political parties attract voters?
3. Do you think there should be more members of parliament who are younger? Why?

15B

What shapes our decisions at election time?

1. What does it mean to be a citizen in Australia?
2. What factors might influence your vote at election time?
3. How could social media be used to raise awareness of an issue at election time?

Source 1 Ruby Gamble voting at her local polling place before her wedding on election day in 2016.

15.1 Living in a democracy

Australians over 18 years of age have the right to vote at elections for **candidates** that most closely represent their views about how their country, state, territory or local area should be run. This is called **representative democracy**.

In a representative democracy, elections are held at regular intervals. If we are not happy with our elected members, we can vote for others to hopefully do a better job at the next election.

Australia is also a **liberal democracy**. This means there are certain values that are viewed as extremely important. Freedom of speech is one such value. Australians have a right to peacefully protest, whether it is by joining a protest march, signing an online petition, talking to the media about an issue or contacting a member of parliament. Other liberal democratic values or principles are illustrated in Source 4.

Australia is the envy of many other countries because of our liberal democratic values. The following case study highlights some of the problems that occur when liberal democratic values are not upheld.

case**study**

Could this ever happen in Australia?

Malala Yousafzai

Source 1 Malala Yousafzai

Malala Yousafzai, a Pakistani student, was only 15 years of age when she was shot in the head by a gunman in October 2012 on her way home from school. The attempted assassination occurred because Malala believed that girls had the right to be educated and had spoken out about this. The ruling group called the Taliban had at times banned school education for girls living in the Swat district of the Khyber Pakhtunkhwa province in Pakistan. Thankfully Malala survived her attack and remains a political activist today.

Pussy Riot

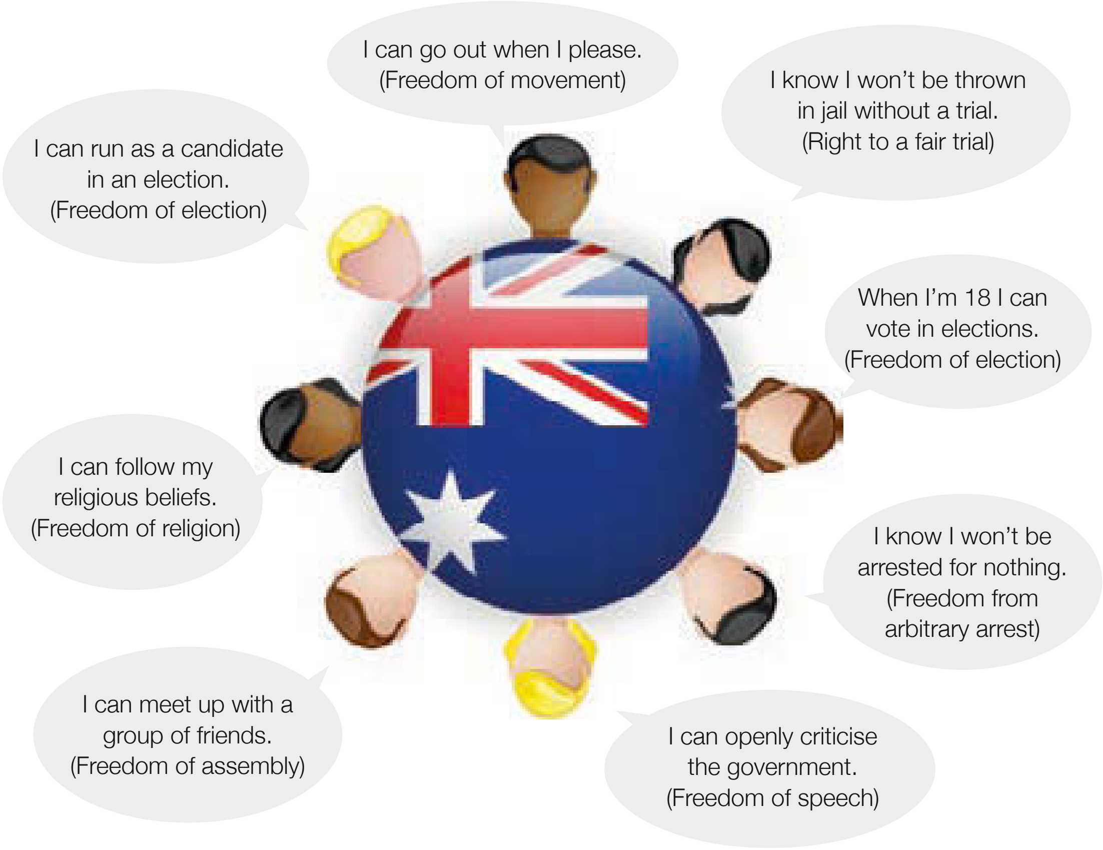
Source 2 Two members of the band Pussy Riot

A feminist punk rock group called Pussy Riot caught world attention for their political protest in 2012. They staged a performance in a Moscow cathedral and posted their music video entitled 'Punk Prayer – Mother of God, Chase Putin Away!' on the Internet. The group opposes Russian President Vladimir Putin's policies and believes he is a dictator. Three of the band's members were charged with hooliganism and sent to jail. Many in the West opposed the jailing of the girls, believing they had a right to exercise free speech and protest against the **government** of the day.

Aung San Suu Kyi

Source 3 Aung San Suu Kyi

Aung San Suu Kyi is a Burmese **human rights** activist and politician. In 1988 she protested against the military regime that ruled Myanmar (Burma) and in 1989 was placed under house arrest – jailed at home – for her political activities. She spent 15 of the next 21 years in custody. Aung San Suu Kyi wants genuine **democracy** for her country with free and fair elections and respect for human rights.


I can go out when I please. (Freedom of movement)
I know I won't be thrown in jail without a trial. (Right to a fair trial)
I can run as a candidate in an election. (Freedom of election)
When I'm 18 I can vote in elections. (Freedom of election)
I can follow my religious beliefs. (Freedom of religion)
I know I won't be arrested for nothing. (Freedom from arbitrary arrest)
I can meet up with a group of friends. (Freedom of assembly)
I can openly criticise the government. (Freedom of speech)

Source 4 Liberal democratic values that we aim to uphold in Australia

Check your learning 15.1

Remember and understand

1 Name one important value of a liberal democracy.

2 Why is holding regular elections so important?

3 Give an example of one political activist who suffered as a result of speaking out against the government of the day.

Apply and analyse

4 For countries that don't have free **democratic elections**, how is it decided who will run the country?

5 In the following cases, have democratic values been upheld? Provide a reason for your answer.

   a In 2007, an Australian named David Hicks pleaded guilty to a United States military commission in Guantanamo, Cuba, for providing material support for terrorism. He alleges that he only pleaded in this way because he wanted to be released and had been tortured while in a prison in Guantanamo.

   b Kevin Rudd was the leader of the Labor Party that won the Australian election in 2007. He was Prime Minister for three years until 2010 when his deputy, Julia Gillard, challenged him for the position and won.

   c In 1974, the leader of the democratically elected Labor Party in Australia, Gough Whitlam, became Prime Minister, but was dismissed a year later by the Governor-General.

   d Robert Mugabe, the 90-year-old President of Zimbabwe, has recently warned journalists that any reporting on his health would result in severe punishment.

Evaluate and create

6 Draw an image that illustrates what you think of our liberal democratic values in Australia. You might use an image that shows freedom, such as an open door, a dove or a key.

15.2 Australia's political system

Australia has what is sometimes called a **parliamentary democracy**. This is because those who are elected to represent us meet at a place called parliament. It is in parliament that **laws** are changed or new laws passed that affect all Australians.

Australia's national parliament

In Australia, there is a national parliament that makes laws that concern the whole country such as defence, immigration and trade for the whole nation. This national parliament is sometimes called the Federal or Commonwealth Parliament and is situated in Canberra.

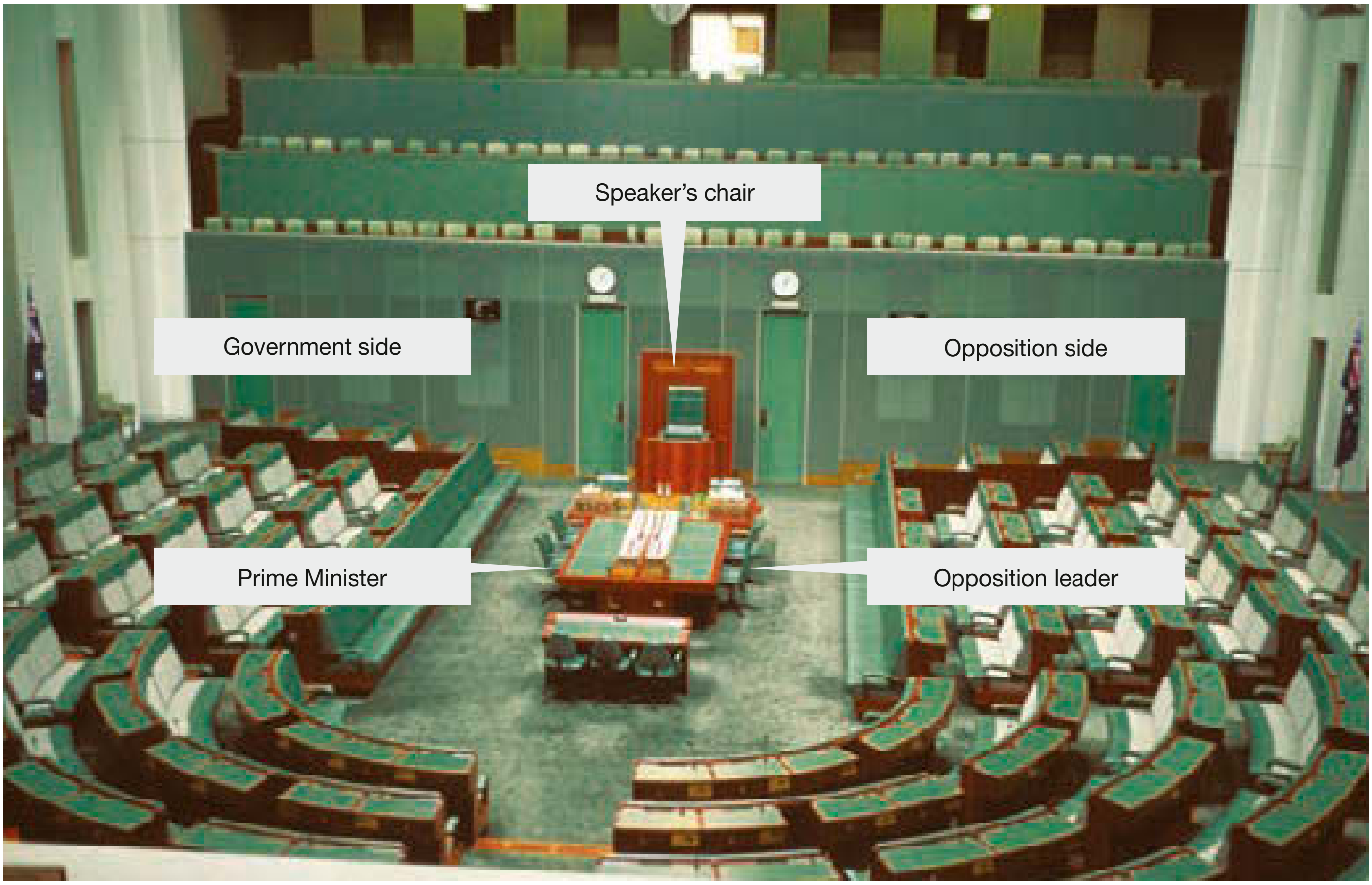
Each of the six states and two territories in Australia also has a parliament that makes laws on matters of state importance such as education, transport and health. Each state parliament is democratically elected. Local councils are not called parliaments, but they do make laws on local matters such as rubbish collection, town planning and pet control. Local councils are democratically elected and there are more than 560 local councils in Australia today.

What has just been described is a **political system**. A political system is a way of determining who has the power and responsibility for making decisions about important matters that affect people's daily lives. The political system we have today is set out in a document called the Australian **Constitution**, which commenced on 1 January 1901. The Constitution established a federal parliamentary system where the responsibility to make or change laws in certain areas is shared by one national parliament and six state parliaments.

The inner workings of the Commonwealth Parliament

Australian Parliament consists of two sections referred to as the upper and lower houses of parliament. The **lower house** of our Commonwealth Parliament is called the **House of Representatives**. Since we have representative democracy, it follows that representatives are chosen from all over Australia to represent our views. In order to achieve this representation, Australia is divided up into 150 geographical divisions known as **electorates**, or seats. Each electorate has roughly 94 000 voters. At election time, one candidate is elected

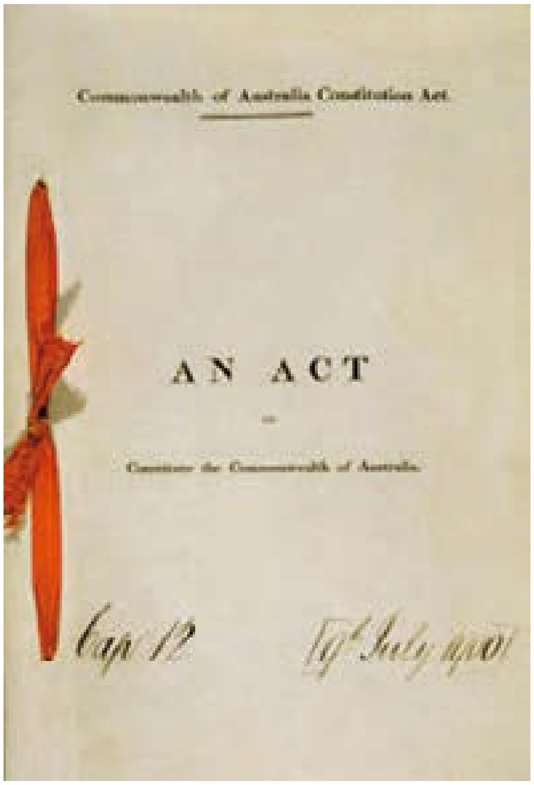
Source 1 Our national parliament – Parliament House in Canberra



Source 2 The House of Representatives in Parliament House, Canberra. The House of Representatives is also known as the lower house.

from each **electorate** and becomes a member of the House of Representatives. It is fitting that the House of Representatives is sometimes referred to as 'the people's house'.

Most of the members elected to parliament will belong to a political party. Members of a political party have similar ideas and policies on how to best govern the country. A political party or group of parties, known as a **coalition**, that wins a majority of seats in the House of Representatives (at least 76 of 150 seats) will have won the election, and forms government. It's a simple case of **majority rule**. The leader of the party (or coalition) that has won the majority of seats in the House of Representatives is the Prime Minister. The leader of the party (or coalition) that has the largest number of seats but has not gained a majority in the House of Representatives is the **opposition** leader. If neither party can get 76 seats for a majority, it is known as a **hung parliament**. In such cases, it is possible for a major party to form a **minority government** by negotiating with minor parties or independents for their support.


Commonwealth of Australia Constitution Act

AN ACT

to

Constitute the Commonwealth of Australia.

Cap 12

9th July 1900

Source 3 The Australian Constitution established a **federal system** of government.

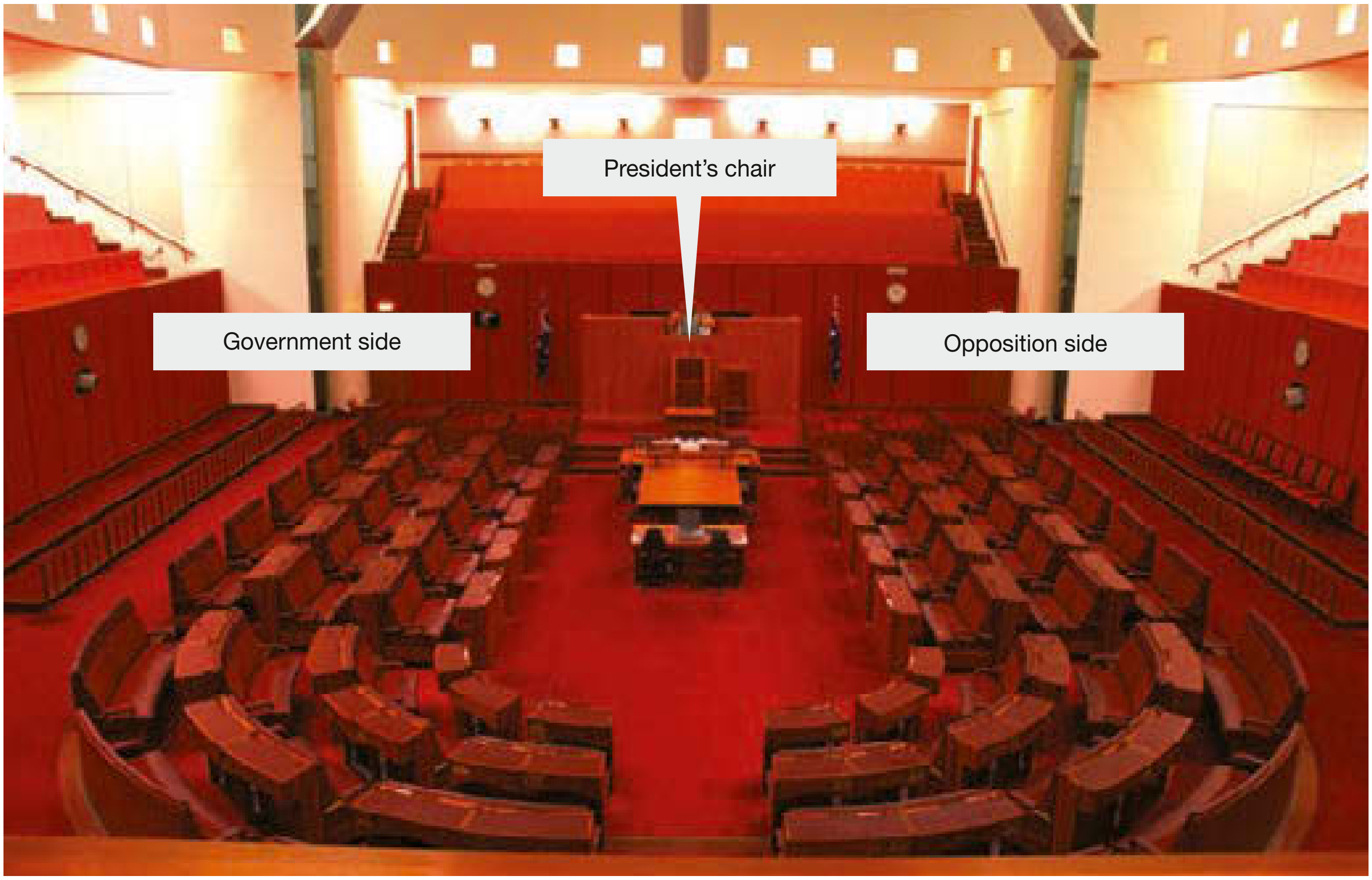
Source 2 shows the layout of seating in the House of Representatives. The government of the day is the party or coalition that has won the election, and therefore has what is called a **mandate** or permission to act on behalf of the people of Australia. Each new government brings with it fresh ideas and experience on how best to manage the country. The opposition's role is to hold the government accountable for its actions. In the media, you will often hear an opposition member criticising what the government is doing. It is this close scrutiny of how the country is being managed that is part of our democratic system.

Why two houses of parliament?

The **upper house** of our Commonwealth Parliament is called the **Senate**. It was originally set up to protect the interests of the states. When the Constitution was written, it was decided that each state should be equally represented regardless of its size, so that the smaller states would still have a say. Each state is represented by 12 **senators** today. The Australian Capital Territory and the Northern Territory are represented by two senators each. Senators are elected to represent the interests of the state they belong to, but in reality they often belong to a political party and will be influenced by party policy rather than state interests.

You might be wondering why we have two houses of parliament, especially when the real action seems to take place in the House of Representatives where the government is formed. An important purpose of having the Senate is that it is seen as a **house of review** – a house that checks what the government of the day is doing and holds it accountable for its actions.

It is important to understand the difference between the terms 'parliament' and 'government'. As previously mentioned, the government is the party or coalition that has a majority of seats in the House of Representatives. The Commonwealth Parliament includes both houses of parliament as well as the **Governor-General**, who is the Queen's representative in Australia. The Governor-General is appointed by the Queen on the advice of the Prime Minister. The Governor-General performs many duties such as appointing ambassadors, ministers and **judges** and also approves laws passed by both houses of parliament.



Source 4 The Senate in Parliament House, Canberra. The Senate is also known as the upper house.

Source 5 The Governor-General is the Queen's representative in Australia. Sir Peter Cosgrove became the Governor-General in 2014.

Check your learning 15.2

Remember and understand

1 Give two examples of laws that might be made by:
  - a the Commonwealth Parliament
  - b state and territory parliaments
  - c local councils

2 What is the Constitution?

3 What is the purpose of the Senate?

4 What is another name for:
  - a a seat
  - b the House of Representatives?

Apply and analyse

5 Refer to Source 2 and explain why there would usually be more people sitting on the government side than the opposition side.

6 List one possible advantage and one disadvantage of having a federal system.

7 Look at the following election results and decide which party or coalition will form government.

Australian Labor Party	**55**
Liberal/National Coalition	**90**
The Greens	**1**
Katter's Australian Party	**1**
Nick Xenophon Team	**1**
Independent	**2**

Evaluate and create

8 Draw a diagram that illustrates the number of members in both houses of the Commonwealth Parliament and how it is determined who the government is.

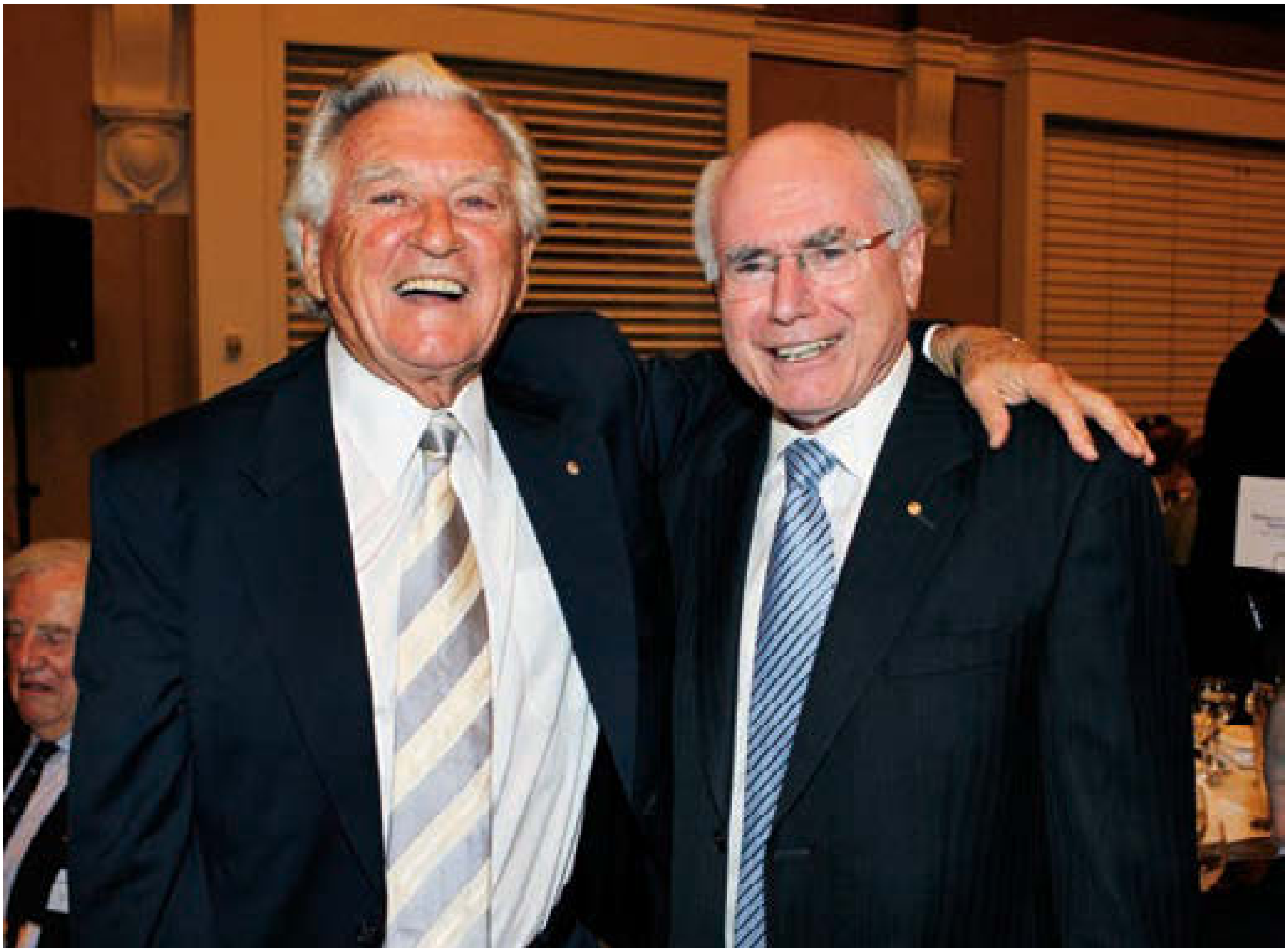
15.3 Political parties and policy developments

The Australian Parliament is made up of members from a number of different political parties, along with independent candidates (who do not belong to a political party).

Political parties

Political parties are made up of groups of people who share similar ideas about how their country or state should be run. In Australia, two political parties dominate: the Labor Party (often referred to as the ALP) and the Liberal Party.

There are many other smaller political parties such as the Nationals and the Greens. The primary purpose of the two major political parties is to win the election. Each political party puts forwards their own candidates at election time; if a majority of those candidates win their lower house seats, they are said to be 'in power' and able to form government. The Liberal Party and the Nationals often join forces in a coalition (partnership) in order to form government together. It is the government of the day that has the power to make important decisions.



Source 1 Former Labor prime minister Bob Hawke and former Liberal prime minister John Howard both won four Australian elections. John Howard is Australia's longest-serving prime minister after former prime minister Robert Menzies (1894–1978), who won eight Australian elections.

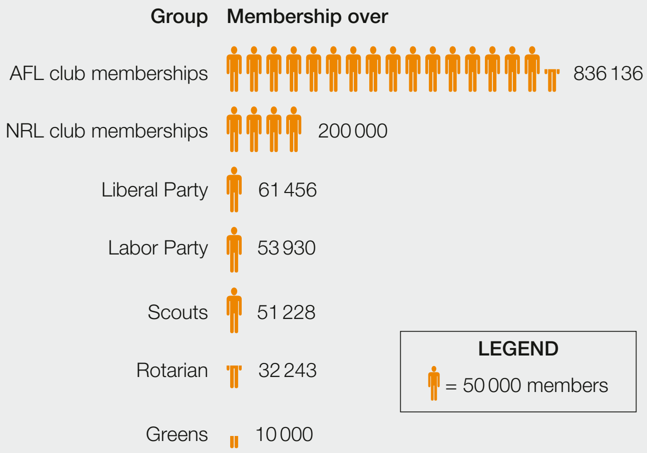
casestudy

Why don't Australians want to party?

Membership of sporting clubs, such as the AFL, far surpasses membership to political parties in Australia, but this wasn't always the case. In the 1950s, membership of both major parties was around 350 000. It seems that in our busy lives there's little time for politics. Many people feel that they have 'a say' at the polling booth so why bother joining a party?

Both the major political parties are now heeding the call to recruit new members and are making changes to encourage more people to join a political party. Senator Sam Dastyari believes political parties must change some of their ways. He says there is too much emphasis on having regular face-to-face meetings, when there are other ways to communicate in the 21st century.

There are almost 60 different political parties registered on the Australian Electoral Commission's website. Some parties have broad-ranging ideals, while others have more specific causes to fight for.



Source 2 Many political parties must review their membership policies if they want to increase party membership. The membership data above was accurate as at November 2015.

Labor

KEY PRINCIPLES

- Australia's oldest political party
- Believes that the government should play a strong national role
- Strives for a fairer Australia for all workers
- Tries to close the gap between the rich and poor so that wealth is more evenly distributed

LIBERAL

KEY PRINCIPLES

- Believes in the power of the individual and business to make their own choices and prosper
- Strives for less government control
- The Liberals and the Nationals join forces at the federal level so they have enough members to form government

NATIONALS for Regional Australia

KEY PRINCIPLES

- Represents the interests of those Australians that live outside the cities in country Australia
- Believes in strong local communities, referring to themselves as the 'local champions'

Source 3 The Labor and Liberal Party are the two dominant political parties in Australia today. The Liberal Party often forms a coalition with the Nationals in order to form government.

The role of independents in parliament

Not all members of parliament belong to a political party – these members are called independents. Some independents may have belonged to a political party but were dissatisfied. Independents may have views that do not quite fit a party mould. Independents can play a powerful role in Parliament, particularly if the major party relies on their vote to pass important laws. Andrew Wilkie is an independent who was elected by voters in the Tasmanian seat of Denison. Wilkie's primary campaign in the 2010 election was the removal of poker machines.

There are various influences that shape Australia's political system, and that influence government **policy**. Public opinion, the media and international pressures are just some of the factors that may come into play.

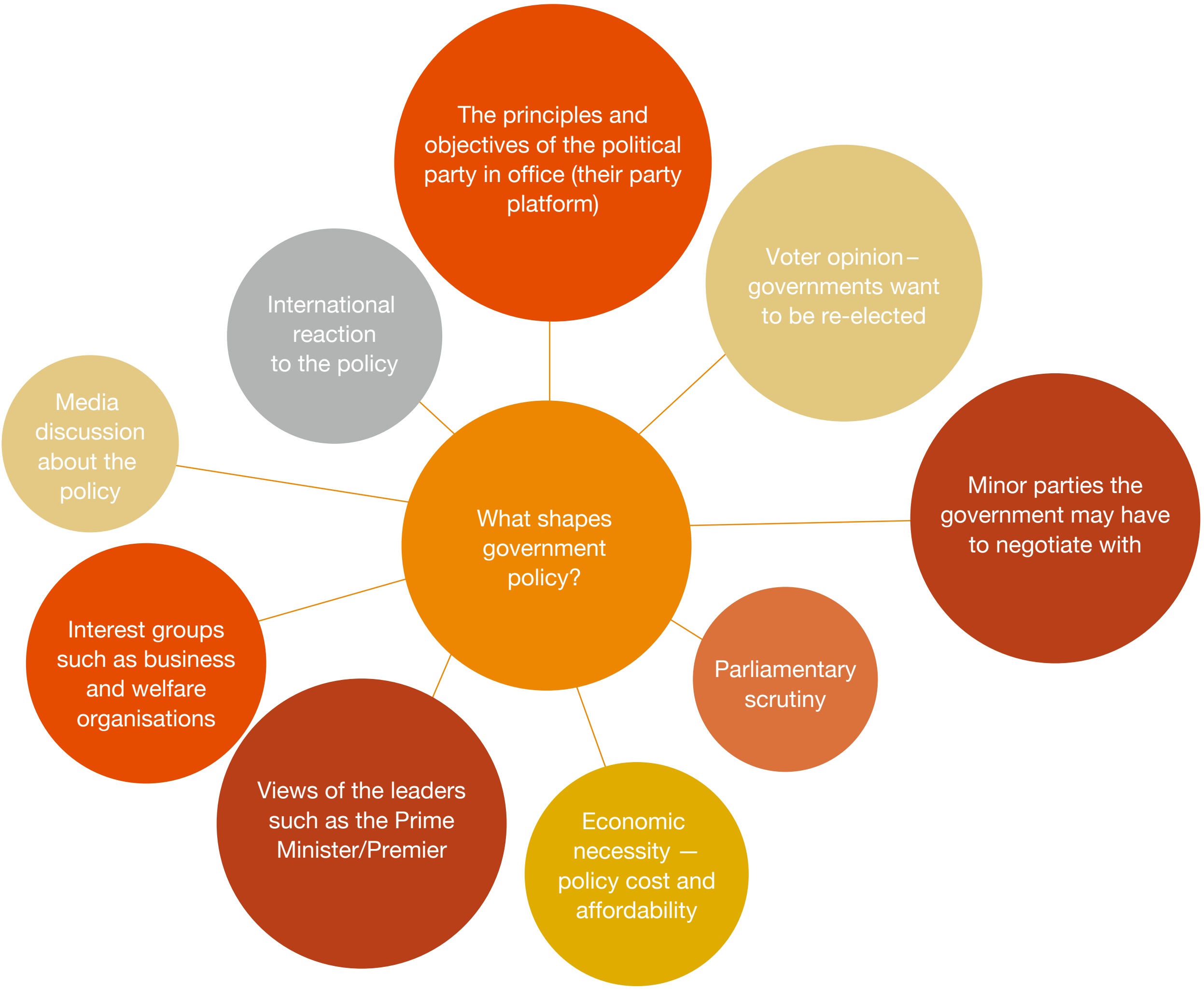
Shaping and developing government policy

A policy is a statement of principles that aims to guide action that must be taken in the future. At a school level, for example, there may be an environmental policy that includes plans to recycle, reduce waste and reuse resources. Political parties develop policies that we usually learn about at election time. This is also called a **party platform**, which sets out the party's goals in order to appeal to voters. For example, around the 2013 federal election time, the Liberal Party of Australia announced their policy to 'stop the boats', a policy that was aimed to deter people seeking **asylum** in Australia by boat without a valid visa. During the 2016 federal election campaign, the Labor Party focused on health care, promising to protect bulk-billing rates and increase hospital funding.

The political party that wins the election and forms government must put their policies into action. The government of the day is said to have been given the mandate to implement the policies they promoted during their election campaign.

Source 4 shows factors that might influence government policy. Winning an election, though, does not mean that the government can simply set about implementing their policies without any interference. In order to implement many policies, new laws must be passed in parliament. If a government does not hold the majority of seats in the Senate, it will need to negotiate with senators so that they support new **legislation**.

Opinion polls, media and interest groups will also play a role in affecting government policy. For example, a discussion surrounding reform of our tax system and increasing taxes will normally result in business groups and community welfare groups commenting about the effects of the policy. International pressure or relations with other countries may also influence government policy.


The principles and objectives of the political party in office (their party platform)
Voter opinion – governments want to be re-elected
International reaction to the policy
Media discussion about the policy
What shapes government policy?
Minor parties the government may have to negotiate with
Interest groups such as business and welfare organisations
Parliamentary scrutiny
Views of the leaders such as the Prime Minister/Premier
Economic necessity — policy cost and affordability

Source 4 Government policy is shaped by a number of factors.

Source 5 The media often put issues under the spotlight, resulting in policy change.

Check your learning 15.3

Remember and understand

1 Who are the two major political parties in Australia today?

2 What is the main aim of the two major political parties?

3 Refer to Source 3 and choose just one or two words that describe what each party stands for.

4 Name at least one previous Labor prime minister and one previous Liberal prime minister.

Apply and analyse

5 Explain what a policy is and give an example of a government policy you know of.

6 In your opinion, do you think the two major political parties always uphold their beliefs? Why or why not?

7 List at least two possible reasons why someone might want to join a political party.

8 Why do you think membership of political parties isn't as strong as it used to be?

9 Would you ever join a political party? If not, why not?

10 What are independents and why might they have considerable power in parliament?

11 Look at the news stories of the day and give an example of an interest group that is seeking to affect government policy.

Evaluate and create

12 A list of political parties can be found on the Australian Electoral Commission's website. Choose one party and explain in no more than two sentences what that party stands for.

13 What might be a possible problem with having only two dominant parties in parliament? Create a table and enter your ideas under the column headings of Pros and Cons.

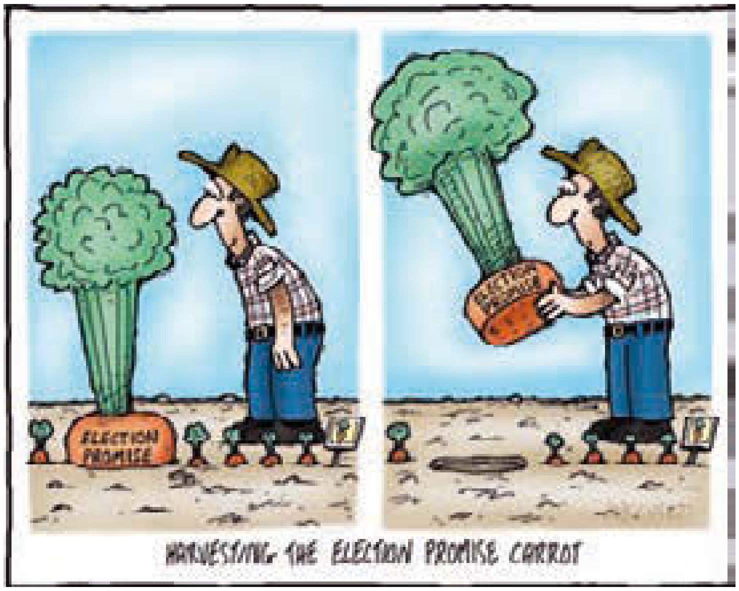
14 Come up with five goals for your own party platform. Remember your platform must be appealing to voters.

15A rich task

Political spin

Political parties want to make themselves look good to voters while making their opponents look bad. In order to do this, they will often present information in a way that they think will win public opinion. This is known as **political spin**. Politicians, journalists and comedians can all spin information to make it work for them. It's sometimes difficult to decipher what's true around election time.

Political cartoonists provide some light relief to the barrage of information at election time because they often use humour. Behind the humour, though, there is usually a serious message.


ELECTION PROMISE
ELECTION PROMISE
HARVESTING THE ELECTION PROMISE CARROT

Source 1 Cartoonists may criticise the way politicians 'dangle carrots' and spin information in the lead-up to an election.

skill**drill**

Analysing political cartoons

Political cartoons appear in newspapers, magazines and online. They are popular because they use humour to pass comment on topical political and social issues. They tend to present caricatures of important political figures, exaggerating their physical features for effect – for example, making a politician's big nose appear huge. Many cartoonists use stereotypes; generalisations about a group of people, for example, that all Australians say 'G'day mate'. Metaphor is also commonly used, where a parallel is drawn between two things that are different. For example, saying a stubborn person is a mule.

When analysing political cartoons, follow these steps:

Step 1 Identify the date when the cartoon was first published and the title of the cartoon or its caption if it has one.

Step 2 Simply look at the cartoon and identify what is happening without trying to understand or interpret it.

Step 3 Identify the political event or issue being shown in the cartoon. Look for visual clues to help you.

Step 4 Look for any symbols, metaphors and caricature that give further clues to the cartoon's meaning.

Step 5 Identify the method the cartoonist has used to bring our attention to the issue. Have they used humour? Is there a serious message the cartoonist is trying to convey behind the humour, and if so what is it? Do you agree with the message? An example of how to use these steps has been done for you.

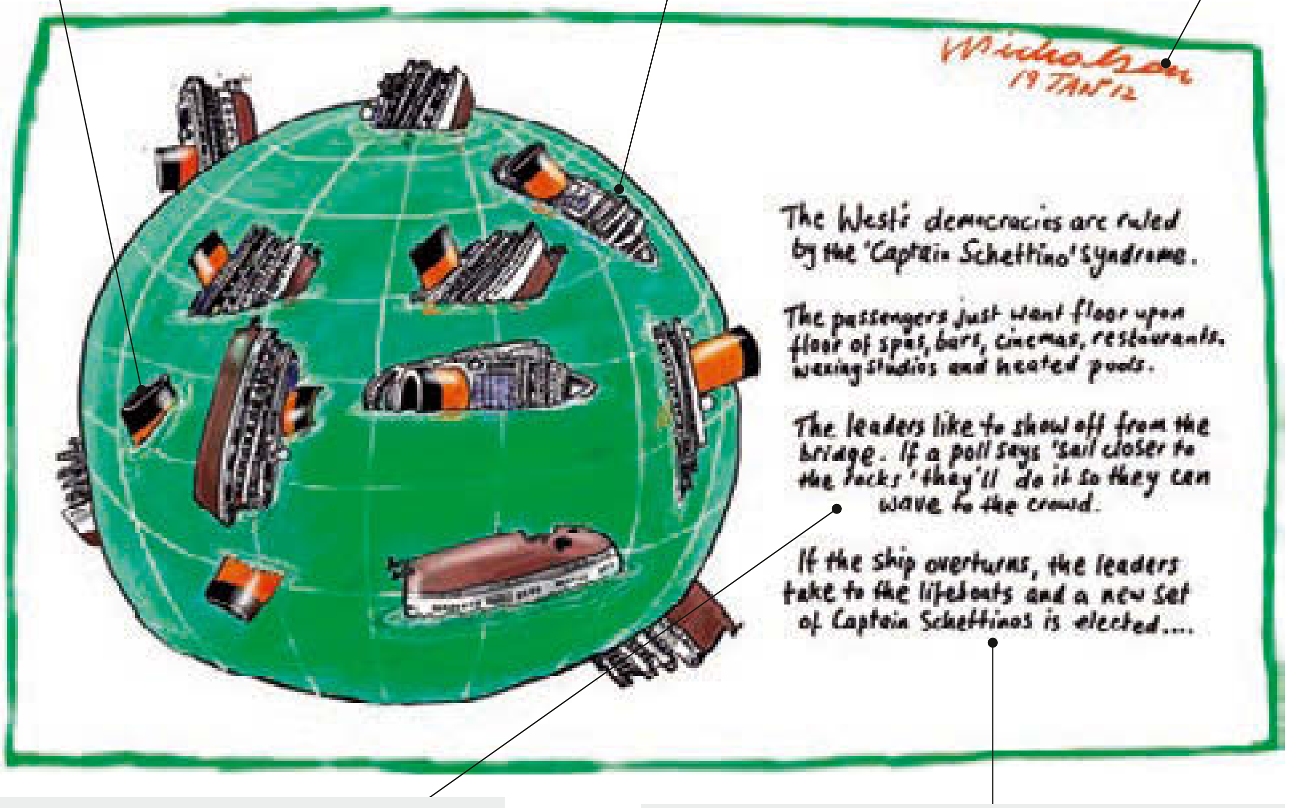
Apply the skill

1 Follow the steps outlined above to analyse Source 1.

Step 2 Ships are sinking. Passengers are in command, not the captain of the ship.

Step 4 The cartoonist has used the metaphor of the sinking ship. The ship signifies democracies in the Western world such as Australia. The passengers are the voters. Captain Schettino in real life was the captain of Italian ship the *Costa Concordia* that sank in 2012. Captain Schettino symbolises the leader of the Government.

Step 1 This cartoon was drawn in 2012.


Nicholson
19 JAN '12
The West's democracies are ruled by the 'Captain Schettino' syndrome.
The passengers just want floor upon floor of spas, bars, cinemas, restaurants, waxing studios and heated pools.
The leaders like to show off from the bridge. If a poll says 'sail closer to the rocks' they'll do it so they can wave to the crowd.
If the ship overturns, the leaders take to the lifeboats and a new set of Captain Schettinos is elected....

Step 3 The cartoonist is saying that sometimes the country is not 'steered in the right direction' because leaders are too worried about what the voters think. They are more interested in staying in power than making the right but tough decisions.

Step 5 The cartoonist is using humour to make his or her point. I agree; sometimes the right decisions are not made because politicians are continually thinking about opinion polls. On the other hand, you could say elections make politicians strive to do better, which is good for us.

Source 2 A political cartoon may be analysed by following the steps outlined above.

Extend your understanding

1 Create a political cartoon of your own about elections by following these steps.
  - a Make a list of points about elections. For example, 'politicians break their promises'.
  - b Think of images that might help you illustrate your point. Think about how you will make people laugh. Consider using symbols, metaphors and caricature.
  - c Roughly sketch out the idea and check whether it works. Is the message too easy, or too difficult to interpret?
  - d Adjust your image, and create a final copy.

15.4 Election time

The lead-up to an election is an important time for political parties and independents to persuade the voting public to vote for them on election day.

Factors that influence voter behaviour

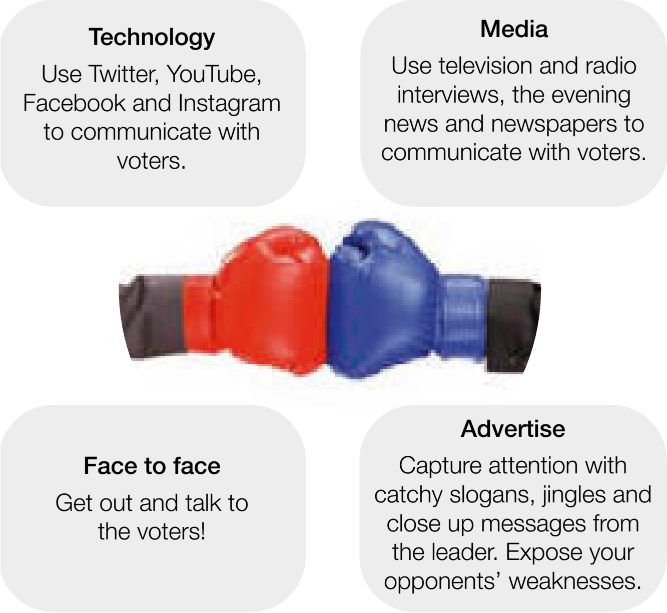
Factors that could influence who a voter decides to vote for include:

- **Public debate**. Competing parties often engage in formal debates that are televised for the nation to see. Debates between opposing MPs are used as a way for parties to publicly argue that their party platform is best and to convince the people that they are the best choice for the job of running the country.
- **Media.** What we read online, see on television and hear on the radio affects our view of the candidates. Not all information is reported impartially and sometimes we can be convinced by the way news outlets portray a party or independent. Sometimes they can make a candidate look very appealing, but they can also make a candidate look unfit for the job.
- **Opinion polls.** Experts measure public opinion of different parties and independents by taking polls. They are a good measure for politicians to monitor their performance, but it can also influence voter opinion. Voters may question why a majority of Australians approve or disapprove of a party or politician. Opinion polls can also draw attention to the poor or strong performance of a party.
- **Advertising.** Parties can pay for advertising space on billboards, newspapers, websites, radio and television. This gives politicians the opportunity to reach voters and convince them that they are the best choice at election time. To do this, they use all kinds of persuasive techniques. Negative advertisements are often used to make their opponents look bad, by highlighting their weaknesses or failures.
- **Interest groups.** Sometimes called lobby groups, interest groups are groups of organised individuals that will campaign on behalf of a certain issue. For instance, an animal welfare interest group might campaign on behalf of the candidate who has the best policies against animal cruelty. They will try to convince people to vote for the party whose policies address their concerns best.
- **Important issues**. The voter may be influenced by short-term issues that affect them personally. For example, a family with children will be interested in childcare and parental leave policies, Longer-term issues such as the economy also affect voter choice.
- **Party loyalty**. Some voters always vote for the same political party no matter what. Sometimes this is influenced by how family members have voted.

Political cartoonists provide some light relief to the barrage of biased information at election time because they often use humour. While they can also present their own bias, cartoonists can break through the political spin of an election campaign and bring attention to serious issues.

Campaign strategies

Political parties and independents use many different campaign strategies to gain voter approval. Presentation is important at election time and conveying the right message to appeal to a wide variety of voters can influence election results. The four main campaign strategies are summarised in Source 1.



Technology
Use Twitter, YouTube, Facebook and Instagram to communicate with voters.

Media
Use television and radio interviews, the evening news and newspapers to communicate with voters.

Face to face
Get out and talk to the voters!

Advertise
Capture attention with catchy slogans, jingles and close up messages from the leader. Expose your opponents' weaknesses.

Source 1 An election campaign is a contest where political opponents battle it out to win our vote. Parties and individual candidates use various strategies to communicate with voters.

case**study**

Will you enrol to vote?

According to Ms Daly, a spokesperson from the Australia Institute, half of all voters under 25 believe that no party represents their interests. Dissatisfaction and disillusionment with political parties and politics may also stop young people from enrolling to vote. First-time voters must enrol with the Australian Electoral Commission before they can vote. One-quarter of young Australians failed to enrol to vote in the 2013 federal election. The Australian Electoral Commission embarked on a Facebook campaign to encourage younger voters to enrol.

Top five issues for young people
1 Jobs for young people
2 Rent and housing
3 University funding
4 Same-sex marriage
5 Climate change

Source: Australian Institute Poll 2013

Source 2 The top five issues for young people

Political parties need to engage younger people if they want to secure their vote in future. According to a report by the Whitlam Institute in 2011, young voters under the age of 35 represent approximately 30 per cent of the electorate. Young people can make an impact on an election result. They also tend to change their vote depending on the issues rather than loyalty to a political party. They are sometimes called swinging or floating voters.

Source 3 Some people are undecided about who they are going to vote for and leave their decision until quite late in the election campaign. They are called swinging voters.

Check your learning 15.4

Remember and understand

1 List three factors that can influence voter behaviour.
2 What is a swinging voter?
3 What must a first-time voter do before they can vote?

Apply and analyse

4 List the four main campaign strategies used by political parties. Which one do you think is most effective? Give reasons for your answer.
5 Make your own list of top five issues that you think political candidates should stand for.
6 Read the following scenarios a–d and decide on the main factor influencing the behaviour of each of the voters.
  a Jeanette's parents are Liberal supporters and she would never think of voting for anyone else.
  b Suada voted for the Labor party because of the same-sex marriage issue.
  c Antoinette voted for the Liberal party because a poll showed they were the country's preferred leaders.
  d John read a lot of political articles and was swayed by one journalist's view of a political party.

Evaluate and create

7 Look at all the factors that might influence a voter. Which factors do you think will influence you the most when you vote in an election?
8 Imagine you are in charge of running an election campaign for someone you admire who is running for office. Create a campaign strategy using Source 1 as a guide. Go further and create a political advertisement either in print or video.

15.5 Counting the votes

Have you ever voted? It might have been for a class captain or you may have voted for your favourite contestant on a talent show. Voting gives us all the freedom to have 'a say' in who we think is the best person for the job.

All eligible Australians aged 18 and over must vote in national and state parliamentary elections. Unlike most major democratic countries, Australia has compulsory voting. Those who do not vote can be fined. Voting is also by secret ballot; no one has the right to know who someone voted for.

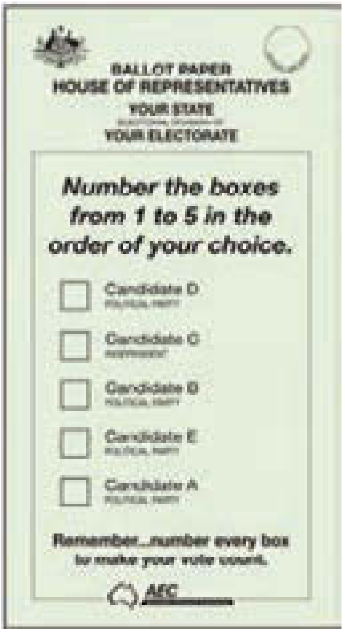
Voting in a federal election – the House of Representatives

On arrival at a polling booth the voter is given two ballot papers to record their vote. The ballot paper to elect one member from their electorate to the House of Representatives can be seen in Source 1. The voter marks their preferences by putting a number in each box. Marking '1' next to the candidate indicates the voter's first preference. The voter then marks their second choice by marking '2' next to a candidate and so on, depending on how many candidates there are in that particular electorate. If a voter does not follow the procedure outlined, the vote will be considered informal (incorrect and incomplete) and won't be counted.

The **preferential system** of voting is used to determine who will win a seat in the House of Representatives. In order to win, a candidate must receive a majority of the votes, which is half of the votes plus one. If a candidate receives the majority of the first preferences, they are elected straight away. If not, then the candidate with the fewest first preferences is eliminated and the second preferences on those ballot papers for that candidate are distributed to the other candidates. If there is still no clear winner, the next candidate with the least number of votes is eliminated and their preferences are distributed. Members of the House of Representatives are elected for a term of three years.

Voting in a federal election – the Senate

Senators are elected for six years. At election time, only half the positions in the Senate become vacant. After the election, half the Senate will consist of newly elected senators and the other half is made up of senators who are halfway through their six-year term.



BALLOT PAPER
HOUSE OF REPRESENTATIVES
YOUR STATE
YOUR ELECTORATE

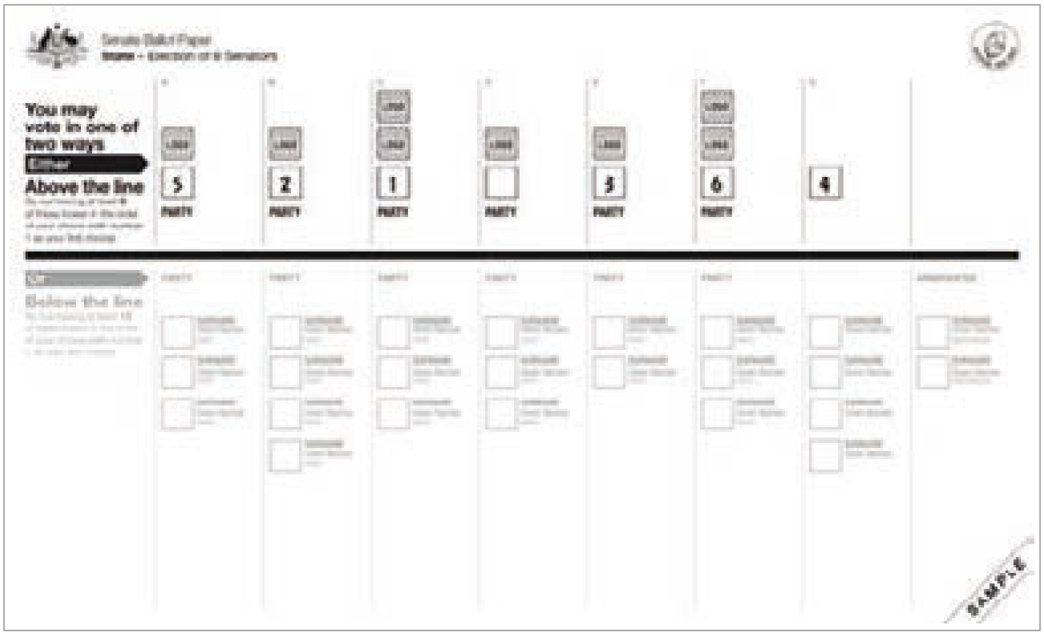
Number the boxes from 1 to 5 in the order of your choice.

☐ Candidate D
☐ Candidate C
☐ Candidate B
☐ Candidate E
☐ Candidate A

Remember...number every box to make your vote count.

AEC

Source 1 A House of Representatives ballot paper



You may vote in one of two ways
Either
Above the line

5	2	1	☐	3	6	4
PARTY	PARTY	PARTY	PARTY	PARTY	PARTY	

Or
Below the line

SAMPLE

Source 2 Senate ballot paper

The aim of this rotating system is so that the Senate reflects the view of voters at different times.

On election day, the voter is given a large white ballot paper (see Source 2), and can vote for candidates in one of two ways. Voters can mark their preferences numbered from at least 1 to 6 for a party or group in the boxes above the line (although they can number all boxes above the line). Alternatively, they can number their preferences for candidates from at least 1 to 12 below the line (but they can number all boxes below the line if they wish).

Proportional representation is the voting system used in the Senate. In Senate elections, voters are voting to fill more than one vacancy. In order to win a place in the senate, the candidate must reach a **quota.**

A quota is determined by adding one to the total number of vacancies to be filled and then dividing this number by the total number of formal votes and adding one.

The quota for electing six state senators is calculated like this:

$$\begin{aligned}\text{Number of formal votes} &= \mathbf{700\,000}\\ \text{Senate seat vacancies} &= 6\\ \text{Quota} &= \left(\frac{700\,000}{6+1}\right)+1\\ &= 100\,000 + 1\\ &= 100\,001\end{aligned}$$

A candidate that reaches the quota becomes a senator.

Check your learning 15.5

Remember and understand

1 What is the system of voting used in the following houses of federal parliament?
  a House of Representatives
  b Senate.

2 What are the consequences of not voting in a federal or state election in Australia?

3 A voter who votes above the line on a senate ballot marks their first preference only. Who decides the voter's preferences?

Apply and analyse

4 Give one reason why we vote by secret ballot in Australia.

5 Provide one argument for and one argument against compulsory voting in Australia.

6 Why are only half the senators elected at each election?

7 Use the election results shown in the table to calculate who has won their seat in the House of Representatives election. Assume for simplicity that there are only 100 voters.

Candidate	John	Isabelle	Tony	Aditi
First preferences	40	31	15	14
Second preferences	• Isabelle 15 • Tony 15 • Aditi 10	• John 20 • Tony 10 • Aditi 1	• John 5 • Isabelle 5 • Aditi 5	• John 11 • Isabelle 2 • Tony 1

8 Calculate the quota for a senate election in the ACT where two senators are elected and there are 2400 formal votes.

Evaluate and create

9 Go to the Australian Electoral Commission website and search for 'Comic creations'. Use the interactive to create an online comic strip about the ways of voting.

10 Go to the Australian Electoral Commission website and find out:
  a when women were given the right to vote in Commonwealth elections
  b when Indigenous Australians were given the right to vote in Commonwealth elections.

11 Create a PowerPoint presentation that communicates the main issues that led to each of the groups in Question 10 being given the right to vote.

15.6 The influence of social media

Think about a major issue such as climate change, asylum seekers or domestic violence. How much do you know about this issue and how much of that is shaped by what you have read online?

In today's technology-driven society, social media is a major source of news and information. Social media can be defined as the websites and applications we use to share content and connect with people online around the world. Our understanding of what is going on in the world is shaped by what we read on social media sites such as Facebook, Twitter, Snapchat and Instagram, especially for younger generations.

Source 1 There are many different social media platforms that can be used to create and share content online.

The reliability of social media

Social media is not always the best source of information when we want to learn more about important issues. This is because anyone can post whatever they like, whenever they like. We can all post, share, tweet and retweet stories in a way that allows information to flow quickly and to a large audience. Sometimes this information can go viral without being properly researched or fact-checked, or without even being true. This misinformation can be read by thousands of people, giving people the wrong impression and influencing their opinions on important issues. It is therefore important to be critical of what we read on social media, as misinformation on social media can spread quickly.

You might have read online that a celebrity has died, only to read soon afterwards that it was just a hoax. Lady Gaga, Dwayne 'The Rock' Johnson, Jackie Chan and Russell Crowe are just some of the celebrities who have incorrectly been declared dead by social media. This simple example demonstrates how important it is to question what you read online.

Political strategy

With so many voters now consuming information and news online, many politicians have started using social media to spread their campaign messages and connect with more people online. Social media accounts and pages can be used to do this in the following ways:

- Politicians can communicate information quickly and to many people.
- Parties can choose what information is presented to their social media audience, giving them a platform of election issues or helping them to discredit their opposition.
- Politicians no longer need to rely on attention from traditional media outlets to get their message out.
- It is a cheaper alternative to television or billboard advertising.
- It is possible to harness 'viral' marketing techniques to spread the message, with social media users sharing information on the politician's behalf.
- Voters can interact with politicians to ask questions, give support or voice concerns.
- Social media reaches younger audiences – the 'youth vote' – in a more effective way than traditional media.

During the 2016 election campaign, Prime Minister Malcolm Turnbull had more than 290 000 likes on Facebook and more than 620 000 followers on Twitter. These social media platforms were used to share photos and campaign updates in a way that reached younger voters.

Social media also helps candidates who do not have the financial or political support of larger parties to gain attention from the general public. For example, during the 2016 federal election campaign, television host James Mathieson used Facebook as a platform to announce he was running for a seat in parliament against former prime minister Tony Abbott. Although he did not win a seat in parliament, Mathieson created enough interest on social media to win nearly 12 per cent of the vote in a very tight election race.

turnbullmalcolm
Follow
1,263 likes
3w
Log in to like or comment.

turnbullmalcolm Thanks to the team at Sydney Trains for this morning's travels and of course what would it be without a few selfies? #ausvotes #election2016

orange_juice_xd 3rd

sofiazielenka @hannah_sexton GOALS

chantellesk Good luck Malcolm!

scottscotto ✓

nicolaou1 Visit Barton and help Nickolas

Source 2 Malcolm Turnbull used different social media accounts to share information about his political campaign, and to appear more relatable to voters.

Check your learning 15.6

Remember and understand

1 What is social media?
2 Why is it important to question what we read online?
3 Name three reasons why politicians might use social media.

Apply and analyse

4 Consider the social media campaigns of Malcolm Turnbull and James Mathieson. How did they use social media to help their political campaigns?

Evaluate and create

5 Imagine you are in charge of planning the social media strategy for a politician who is running in your local electorate for the first time. People do not know him very well so he needs to increase his public profile. Choose one social media platform and develop an audiovisual presentation to explain why you chose that social media platform, how you will use the social media site to increase his profile, what kind of information you will post or share, and how often you will post. (Hint: you might also like to promote events or activities for the campaign as part of your social media presence.)

15B rich task

The power of social media campaigns

Throughout history there have been notable leaders who have sought social and political change. Famous social **agitators** include Nelson Mandela, who fought to break the system of **apartheid** in South Africa, and Mahatma Gandhi, who fought for India's independence. A social agitator stirs the emotions of others in order to seek desired change. Mother Teresa is another person who sought change, committing her life to helping the poor people of Kolkata in India.

Source 1 Chris Raine set up his own blog about how he gave up alcohol for the year.

TIME
Mandela at 90
The Secrets of Lead

Source 2 Nelson Mandela fought to rid South Africa of apartheid.

MOTHER TERESA
Honorary AC, 1982
AUSTRALIA 70c

Source 3 Mother Teresa's work on behalf of the poor in Kolkata was so well-known that her life and work were commemorated in many countries through artworks such as paintings, statues and postage stamps.

Agitating for change is what many volunteer organisations do, whether it be raising money for cancer research or ensuring the poor have access to food, shelter and clothing. Everyday people can seek change through volunteering their services.

Chris Raine is a young Australian fighting for a social cause that started with a desire to improve his own life and change the drinking culture within Australia. In 2008, he decided to give up alcohol for a year and wrote a blog about his experiences. Now he has over 200 000 followers and a website called *Hello Sunday Morning*.

Chris decided to do something about his own drinking habits, tired of waking up on a Sunday morning with a hangover. He had read that alcohol is responsible for the deaths of over 260 young Australians annually, not to mention the health and social costs associated with sustained use of alcohol. In 2012, Chris was a national finalist in the Young Australian of the Year awards for his work as an anti-binge-drinking campaigner.

skill**drill**

Developing a plan for action to respond to a civics and citizenship issue

Have you heard of the saying, ‘failing to plan is planning to fail’? Most of us understand that things don’t just happen unless we have a plan. Planning takes some time at the beginning of a project, but, once complete, it provides important signposts to enable us to reach our end goal. Follow the eight-step approach for developing a plan. If you need to, make a visual presentation of your plan by using a flow chart, a Gantt chart (a bar chart displaying a project’s schedule) or a spreadsheet.

Step 1 Set a goal. What is the end result you would like to achieve? Your goal, for example, may be to reduce your impact on the environment, help a charity, or write a blog to raise awareness about the dangers of using a mobile phone while driving.

Step 2 Decide how you will measure success. You can measure success in many ways. For example, reducing your environmental impact might be measured by reduction in non-recyclable garbage. Or, helping a charity might be measured in dollars raised or time spent giving assistance.

Step 3 Establish tasks. List what you need to do in order to turn your goal into a plan of action. For example, tasks to reduce your impact on the environment may include installing a compost bin, growing your own food, not buying packaged foods, and using recyclable shopping bags.

Step 4 Prioritise tasks. Look through your list of tasks and rate them on a scale of 1–10 to identify the most important tasks.

Step 5 Break each task down into smaller tasks. For example, installing a compost bin may mean purchasing the bin first, deciding where it is best placed and then installing it in the garden.

Step 6 Add time frames for each task. This might involve estimating how much time each task will take and identifying a date when you could complete them.

Step 7 Allocate tasks. If you are working in a group, think about each member’s skills and allocate jobs accordingly. Try to make sure the workload is spread evenly.

Step 8 Monitor task completion. Regularly check the time frames you set in Step 6 to ensure you are on schedule.

Apply the skill

1 Develop a plan that responds to a civics and citizenship issue. Brainstorm what a civics and citizenship issue is. Think about whether there are any issues with regard to voting you would like to consider. For example, you might start a campaign to raise awareness about the importance of enrolling to vote. Remember that citizenship can include taking social responsibility, so think about something you feel passionate about, whether it is reducing your own environmental impact on the Earth, or simply doing something unexpectedly helpful for someone else in your community.

2 Use the eight-step approach for developing a plan as outlined above and then, in consultation with your teacher, talk about putting that plan into action.

Extend your understanding

1 Undertake research about a person you admire who has agitated for social, political or environmental change. You could choose from the following list or choose an entirely different person.

- Bill and Melinda Gates
- Sir Bob Geldof
- Al Gore
- Eddie Mabo
- Mother Teresa
- Nelson Mandela
- Mahatma Gandhi
- Mary Harris ‘Mother’ Jones
- Martin Luther King
- Florence Nightingale
- Helen Keller
- Aung San Suu Kyi

Our democratic rights

Australia’s legal system

Laws regulate most of the situations we find ourselves in every day. Laws are formal **legal rules** that are designed to govern the way in which people behave and act so we can all live in a peaceful and united society.

In Australia, our laws are made and enforced by a range of different organisations – including the courts, tribunals, **parliaments**, police and prisons – collectively referred to as the **legal system**, or **justice system**. We have a legal system to make sure that laws are obeyed and the rights and responsibilities of all Australian **citizens** are respected.

For people to have confidence in the legal system, it is important that **legal disputes** are resolved in a fair and unbiased manner and that all people are treated equally before the law. Unfortunately, despite best efforts, this is not always the case.

16A

What key principles support Australia’s legal system?

1 Look at each of the different situations represented in Source 1. Do you think all of the people shown are committing crimes? Why or why not?

2 Have you (or any of your friends or family) ever been involved in similar situations where you may have broken the law? Did you do so knowingly and were you caught?

16B

How does Australia’s court system work?

1 As a class, list the names of any Australian courts. Suggest what types of cases might be heard by these courts.

2 As a group, try to think of at least two famous Australian legal cases. When did each of these cases take place, what were the basic facts of each case and what were the outcomes?

chapter 16

FILE NAME
Last Hollywood Blockbuster
100 Pop Hits
Action-Packed Shooter
Image Processing Software
PIRA
ILLEGAL

Source 1 Australia's legal system is designed to govern and regulate the ways in which all citizens behave. A range of formal 'legal rules' known as laws helps to achieve this. There are laws relating to almost every situation we encounter on a daily basis.

16.1 Understanding laws and why we need them

When you think about it, many aspects of our daily lives are regulated by rules. In fact, almost every group to which we belong – whether it is our family, school, local sporting club, church or community group – imposes rules. Often, if we want to stay part of these groups, we have to obey their rules. Likewise, as Australian citizens, we all have a responsibility to obey a more formal set of rules (known as laws). So what is the difference between a rule and a law?

The difference between non-legal rules and legal rules (laws)

Non-legal rules and legal rules (laws) govern our daily lives. There are some key differences between these two types of rules.

Non-legal rules

Non-legal rules are rules or regulations that are imposed upon the members of a specific group so they can work together in a peaceful manner. For example, schools, families and sporting clubs all enforce a range of non-legal rules to ensure the smooth operation of their group. For example:

- schools can require students to wear a uniform and not have obvious body piercings
- parents can require children to undertake specific tasks or chores
- sporting clubs can require regular attendance at training sessions.

Whatever the non-legal rules might be, they are generally imposed to help establish a code of behaviour that is acceptable to the majority of group members so they may work together in a cooperative manner. Any member who breaks a rule may incur a penalty imposed by the group. For example, a sporting club might suspend those who miss a training session from participating in a scheduled game.

Source 1 Sporting clubs have established non-legal rules.

Source 2 A school imposing a code of dress (or uniform) that restricts tattoos or body piercing is an example of a non-legal rule.

Legal rules (laws)

Legal rules, or laws, are similar to non-legal rules in that they also exist to regulate our behaviour. However, legal rules are made by official law-making bodies – such as parliaments, local councils and the courts – and apply to all members of society. Laws are also enforced by the police and courts and any individual that breaks a law may receive a punishment (referred to in legal terms as a **sanction**). These are imposed by the courts, and may include paying a fine, or, for a serious breach, spending a period of time in prison.

Reasons we have laws

There are many reasons why societies must be regulated by laws. Firstly, laws help establish boundaries of acceptable behaviour, so that all members of the community can be aware of the type of conduct that will and will not be tolerated by the majority of people. The goal is that individuals treat one another with respect and do not undertake actions that disturb or violate the rights of others or threaten a peaceful way of life. For example, in Australia we have anti-bullying and anti-**discrimination** laws, which make it unlawful to victimise, abuse or discriminate against another person on the basis of their race, religion or sex.

Laws also help maintain a unified society by preventing disputes from arising and protecting individuals from harm. For example, many different laws exist in Australia to protect individuals and specific groups from danger and maltreatment, including consumer, workplace, family, environmental and child protection laws.

Source 3 There are anti-bullying laws in place in Australia.

Source 4 Laws are made to protect specific groups within our community, including consumers, children and those at risk of being cyber-bullied.

Check your learning 16.1

Remember and understand

1 Why would an organisation such as a school or sporting club impose specific non-legal rules or regulations?

2 What, in legal terms, is a sanction?

3 Describe two sanctions that could be imposed by a court in Australia.

Apply and analyse

4 Identify a club or group that you, or someone you know, belongs to. It could be a sporting club, church group or volunteer society. Investigate and list five non-legal rules that are imposed by the group, and jot them down. Then:
   - a suggest reasons why each rule may have been created
   - b state any consequences associated with breaking each rule
   - c explain whether or not you agree with each rule.

5 List five legal rules or laws that, as an Australian citizen, you must obey. For each law, suggest why the law was most likely made and the likely consequences of breaking the law.

6 Imagine you had the power to create or alter three laws.
   - a What laws would you introduce or change? Give reasons for your answer.
   - b Identify any groups who may oppose your suggested law changes. Give reasons for your response.

Evaluate and create

7 Divide into small groups or pairs and prepare a short role-play that illustrates the difference between non-legal rules and laws. Record or perform your role-play before the class and have your classmates identify the different non-legal rules and laws.

16.2 How laws are made

In Australia, laws can be made by a number of different bodies or organisations. For example, Commonwealth, state and territory parliaments can make laws, as well as other bodies such as local councils and court **judges**.

The role of parliament in law-making

Most laws in Australia are made by parliaments. A parliament is a group of people elected by the majority of society to make laws on their behalf. Laws made by parliament are referred to as **legislation**, **statutes**, or **Acts**. In Australia, we have two levels of parliament – Commonwealth and state/territory. The Commonwealth Parliament, located in Canberra, makes laws that apply to the whole of Australia, while each state and territory also has its own elected parliament to make laws for that specific state or territory.

Source 1 State parliaments have the power to make laws related to driving.

Source 2 Local councils have the power to make laws in areas such as waste disposal and recycling.

For example, the Commonwealth Parliament has made the laws on marriage and divorce that apply to and must be followed by all Australians, regardless of the state in which they live. By contrast, the state parliaments are responsible for making driving and adoption laws, and so laws in these areas may vary from state to state. For example, the minimum age to apply for a probationary motor vehicle driver licence in Western Australia is 17 years, whereas the minimum age in Victoria is 18 years.

In addition to having the Commonwealth, state and territory parliaments making law, laws can also be made by other bodies (referred to as **statutory authorities**) such as local or municipal councils, Australia Post, and Country Fire Authorities. Statutory authorities are created by the parliaments to make minor laws on their behalf in a more timely and efficient manner. For example, the Western Australia state parliament has given municipal councils the power to make a range of specialised laws that apply to local residents, such as laws relating to the use of parks and reserves; recyclable and garden waste; garage sales; and even barking dogs.

The role of courts in law-making

Judges in higher courts, such as the state Supreme Courts and the High Court of Australia, can also make laws on occasion. In simple terms, sometimes when a judge makes a decision to resolve a dispute, the reasoning behind their decision creates a **legal principle** or law that must be followed by judges in other courts when a similar case arises. Law made by judges is known as **common law**, which will be examined in more detail later.

In Australia, all people and organisations – including those who make and enforce the laws, such as members of the parliaments, judges, and the police forces – must obey the law. Indeed, one of the key features of the Australian legal system is that it is based on the **rule of law**, meaning that our laws apply equally to all individuals and organisations throughout Australia and must be upheld by all. The rule of law also means that the law can only be enforced and altered by those with the legal authority to do so. In Australia, the Commonwealth, state and territory parliaments, and courts have the main power to make and enforce the law.

Source 3 Judges in higher courts may, on occasion, make laws.

Check your learning 16.2

Remember and understand

1 Identify the main law-making bodies in Australia.

2 What is a statutory authority? Give two reasons why these bodies are given the power to make laws on behalf of the parliament.

Apply and analyse

3 Decide which level of parliament, Commonwealth or state, would most likely make laws with respect to the following areas:

- **a** currency
- **b** education
- **c** Australian citizenship
- **d** water supply
- **e** anti-terrorism
- **f** hospitals
- **g** fire brigade
- **h** postal services
- **i** border security
- **j** electricity
- **k** asylum seekers
- **l** police force.

4 Suggest one benefit of parliaments making law.

5 Research the name of your local or municipal council and list at least five laws made and enforced by this body.

Evaluate and create

6 Create a poster or collage that illustrates the main law-making bodies in Australia and provides examples of the types of laws made by each body.

7 Go to the Western Australian Parliament website and take a virtual tour of the Western Australian Parliament House.

16.3 Australia’s legal system

Australia’s legal system is made up of a range of courts and tribunals, laws, procedures and legal personnel. This includes judges, **magistrates**, legal representatives or lawyers, the police force and people working in the prison system.

The principles of our legal system

Our legal system is also built on a number of key principles, or beliefs, that are designed to help protect the rights of all Australian citizens. For example, two main principles that underpin our legal system are the belief that all people should be treated equally under the law and that our courts and judges must be independent and impartial. These two principles aim to ensure that all people who come before the courts receive a fair and unbiased hearing or **trial**. Another key principle that strengthens our legal system is that individuals have a reasonable right to appeal decisions handed down by judges.

Key principles behind Australia’s justice system

- All individuals are equal before the law.
- Individuals have the right to a fair hearing.
- The judiciary (i.e. the court system) is independent and impartial.
- Individuals have the right to a reasonable appeal.

Source 1 Key principles of Australia’s legal system

Equality before the law

One main principle that underpins the Australian legal system is that all people must be treated equally before the law. This means that all individuals regardless of their race, ethnic background, sex, income level or mental capacity should be treated equally when dealing with the legal system. This includes being treated equally by the police, court personnel and other legal authorities. We should also all have an equal opportunity to access or use the court system to resolve our disputes.

How is equality before the law achieved?

Various processes and procedures exist within our legal system to help make sure that all people who have dealings with the police, courts and other legal authorities, are treated equally regardless of their personal circumstances or background. For example, a range of laws aim to ensure people are treated equally and fairly when being questioned by the police, including an individual having the right to remain silent and not answer questions (other than giving their name and address); the right to be warned prior to questioning that ‘anything they do or say may be used against them in a court of law’; the right to an interpreter if they do not understand English very well; and, for people aged under 18, the right to have a parent, guardian or independent adult present when being questioned.

Source 2 Lady Justice wears a blindfold to symbolise the legal system is objective and impartial.

Similarly, when being investigated by the police, all people have rights that must be observed including, under certain circumstances, the right to refuse to give forensic samples (such as hair or saliva samples) or participate in identification parades. All people charged with a serious crime (such as serious assault, selling illegal drugs and murder) also have the right to a **presumption of innocence**, meaning they must be treated as innocent until proven **guilty**, from the moment they are charged with a crime to their court hearing or trial. This includes having the right to be free to return home and live within the community (referred to as being granted **bail**) prior to their court appearance unless there is a genuine reason to deny this freedom. This refusal to grant bail could be that the court believes the **accused** person is a potential threat to the community and may harm other people if granted their freedom.

Who might be disadvantaged by our legal system?

Unfortunately, some groups within Australian society, including Indigenous Australians, people from culturally and linguistically diverse communities – such as migrants, **refugees** and **asylum seekers** – and people with mental health issues or intellectual disabilities, often experience difficulty when dealing with our legal system. Cultural differences and language or communication barriers can make it difficult for people within these groups to understand how our legal system operates and to interact or talk with legal authorities such as the police and court personnel. People with low incomes also often cannot afford to have a legal representative or lawyer to help them understand our legal system and prepare and present their case to the court.

Given that there are groups within our community that are at a disadvantage when dealing with our legal system, it is important that support services are provided to assist these groups and cater for their specific needs. One organisation that provides such support is Legal Aid Western Australia – a government-funded but independent body that provides free or low-cost legal advice and lawyers to the most disadvantaged people throughout Western Australia. These people may need assistance with a range of legal issues including crime-related, family, social security, immigration and **discrimination** matters. Unfortunately, however, this assistance is severely limited due to inadequate government funding.

REMEMBER REZA BERATI
MURDER IN DETEN
A DETENTION CENTRE
not a SCHOOL
not a PLAY GROUND
No PLACE FOR CHILDREN
AUSTRALIA PERSECUTES ASYLUM SEEKERS
UNITED NATIONS REFUGEE CONVENTION
AUSTRALIA SIGNED IT
WE SHOULD HONOUR IT!
I AM AN ASYLUM SEEKER
VOTE FOR COMPASSION IN THE SENATE
FREE THE RE
CLOS
MANU
AND
NAURU

Source 3 Asylum seekers, refugees and migrants can be at a disadvantage when dealing with our legal system and often need legal support and assistance.

casestudy

Do people with disabilities need more of a 'fair go'?

In 2014, a report by the Disability Discrimination Commissioner found that the Australian legal system does not provide adequate support services for people with disabilities who come into contact with the criminal legal system – for example, those who might be victims of crime, witnesses or offenders. As such, these people have a greater chance ending up in prison. Disturbingly, people with disabilities are also more likely than the general population to be victims of violence.

In order to improve this problem, the report recommended a range of reforms, including increasing the amount of assistance available for people with disabilities and their carers – such as early intervention services – and providing training for police and lawyers so they are better able to assist these people.

Source 4 Ms Julia Haraksin won a legal action against a tour bus company that denied her service because it could not accommodate wheelchairs.

An independent and unbiased judiciary

The Australian legal system is based on the key principle that our court system (known as the **judiciary**) is independent and impartial. Being independent means that the courts are separate from the elected parliament and government, and the judges and magistrates are therefore free to make decisions without these bodies trying to influence them. Having an independent judiciary is an important feature of our legal system, as it means that no one, even the government, is above the law. It also prevents the government from influencing court decisions and enables the courts to check that the Commonwealth, state and territory parliaments do not misuse or make any laws beyond their power.

Having an impartial judge sitting or presiding over a court case helps make sure that all trials that take place throughout Australia are conducted in a fair and unbiased manner. For example, the judge can ensure that both parties involved in a court case are treated consistently and have an equal opportunity to present their case to the court. This includes having an equal opportunity to present evidence and question witnesses. Judges remain independent and unbiased throughout the entire court case and do not assist either party with the preparation and presentation of their case. This is so that neither party has an unfair advantage over the other.

Source 5 Judges must remain independent and impartial in order to ensure a fair hearing or trial.

The judge also makes sure that both parties have an equal opportunity to present their case by ensuring each follows the strict rules of evidence and procedures when presenting their case to the court. For example, parties can only present relevant and reliable evidence to the court, so the **verdict** is based on appropriate and accurate information. This means that parties cannot present hearsay or 'secondhand' evidence that may be untrustworthy to the court. Similarly, the past criminal record of the accused is usually not to be raised as evidence because it could potentially bias a verdict.

The independence of our judiciary is also maintained by having our courts open to the people. Generally, all court cases are open to the public and the media so the proceedings are transparent or can be viewed by all.

The right to appeal

In an attempt for cases to be resolved in a fair and unbiased manner, the Australian court system allows people who are dissatisfied with the outcome of their case to appeal or have their case reviewed by a higher court – providing **reasonable grounds** for appeal exist. For example, a person who has been found guilty of a crime may be able to lodge an appeal against the guilty verdict or the severity of the sentence if they can provide reasonable grounds. Similarly, a party may appeal if they can show that their trial may have been unfair – for example, the judge did not ensure that the strict rules of evidence or procedure were followed.

Source 6 Courts are open to the public and media to make sure proceedings can be viewed by all.

Check your learning 16.3

Remember and understand

1 Explain two procedures that help ensure court cases are resolved in a fair and unbiased manner.

2 Suggest two rights of individuals that mean they are treated fairly by the police.

3 Describe how the Australian legal system maintains an independent judiciary or court system.

4 Name two aspects a judge should demonstrate to help ensure a fair and unbiased trial.

5 Explain how the use of legal representatives or lawyers can ensure a fair trial.

Apply and analyse

6 Explain two features of the Australian legal system that aim to see that all people are treated equally before the law.

7 Explain two ways in which the Australian legal system fails to treat all people equally.

8 Discuss whether or not a person who is charged with a serious crime – such as attempted murder or serious assault – should be able to refuse to answer police questions, other than providing their name and address.

9 Discuss whether a person who is on trial for a serious crime – such as rape or dangerous driving causing death – should have any of their previous crimes read out to the court prior to the verdict being given.

10 Examine Source 3. How has our legal system failed to support asylum seekers, refugees and migrants? Identify two other groups in Australian society who might be disadvantaged by our legal system.

Evaluate and create

11 Visit the Australian Human Rights Commission website via the link in your obook. Locate the section of the website relating to 'disability rights'. Research the ways in which people with disabilities are not being treated equally before the law. Suggest two changes that could be made to improve this situation.

12 Visit the Legal Aid Western Australia website via the link in your obook and prepare a brochure that outlines some of the main services and assistance offered by this organisation.

16.4 Undermining justice

While our legal processes and procedures are built on a number of key principles, or beliefs, that are designed to help protect the rights of all Australian citizens, our system is not perfect and sometimes injustices occur. Factors such as coercion of suspects and witnesses, trial by media, corruption and court delays can undermine justice.

Coercion of suspects and witnesses

The police must follow a range of legal processes and procedures when investigating a crime to make sure that suspects and witnesses are treated fairly. If these procedures are not followed injustices may occur. For example, all suspects have a right to silence (meaning they do not have to answer any questions from police other than giving their name and address) and a right to an interpreter if they cannot understand English. Injustice may occur if these rights are not observed and a suspect or witness feels compelled or forced to answer questions against their will.

Even a suspect who is informed of their right to silence may still answer police questions when it is against their best interests – particularly if they are not familiar with English or have trouble communicating. For example, various groups of people like Aboriginal people or Torres Strait Islanders, those from a non-English speaking background, and those who have a mental disorder or other disability (for example, a hearing impairment) may be disadvantaged when dealing with the court system because they do not have adequate communication skills, confidence or knowledge to negotiate with the authorities. The police and lawyers have the potential to easily confuse or persuade these individuals to make untrue or conflicting statements that may result in the wrong person being found guilty of a crime.

Trial by media

The media – both traditional and online media – can spread information quickly in a way that can create the impression of a person's guilt before they have even been to court.

Trial by media can undermine the basic principle that all individuals who have been accused of a crime have a presumption of innocence and must be treated as innocent until proven guilty. For example, members of a **jury** (who are responsible for determining the guilt of an accused in a criminal trial) may be biased and think a suspect is guilty because of what they have seen and heard in the media before the trial has occurred. Potential jurors may also feel pressure to find a person guilty or **not guilty** based on public opinion, and find it difficult to remain impartial.

case**study**

Victim's mother fights for justice

In October 2014, Gene Gibson, a 23-year-old Aboriginal man from a remote community in Western Australia, was sentenced by a Supreme Court judge to spend a minimum of five and a half years in prison after pleading guilty to unintentionally killing Josh Warneke by striking him with a pole in an unprovoked attack along a roadside in 2010. Surprisingly, however, the victim's mother, Ingrid Bishop, does not believe that Mr Gibson is her son's killer and is bravely fighting to have him released from prison and his name cleared. Ms Bishop believes the police investigation surrounding her son's death was not well conducted, that Mr Gibson did not understand the procedures and questioning that took place when police arrested him, and that he was coerced or pressured into confessing to a crime he did not commit. Interestingly, after the trial, the Western Australian Corruption and Crime Commission examined the case and found faults in the way it was investigated by the police. Changes to police procedures have been introduced to ensure all Indigenous people who are suspects and witnesses in a crime are provided with interpreters.

Source 1 Ingrid Bishop is fighting for justice – she believes the wrong man is serving prison time for her son's death.

Over the years, intense and concentrated media coverage of high-profile court cases has jeopardised the ability of jurors to remain unbiased and led to unfair trials. Perhaps the most famous Australian case in which this occurred was in 1982 when a jury wrongly found Lindy Chamberlain guilty of murdering her baby at Uluru in the Northern Territory. The baby was actually taken by a dingo. Many commentators believe the extremely negative media campaign surrounding Mrs Chamberlain contributed to the jury's incorrect finding. It took Mrs Chamberlain more than six years to have her guilty verdict quashed (cancelled).

Source 2 Lindy Chamberlain was a victim of trial by media.

Corruption

Within any organisation, corruption can exist and unfortunately our legal system is no exception. Corruption is any form of dishonest or unethical behaviour that causes people to break rules for their own gain. Corruption can include things such as bribery, which in the court system might involve taking money from someone to alter the outcome of a court case. It is therefore essential that we have independent and unbiased anti-corruption agencies to investigate and punish those involved in the legal system (such as police, lawyers, magistrates, judges and politicians) who may misuse their power and authority for their own benefit. We also rely on 'whistle blowers', or people who are willing to come forward and report corrupt behaviour to the anti-corruption agencies in order to investigate those cases.

Court delays

Taking a case to court takes time and unfortunately will often involve delays. Delays in **criminal cases** can be caused by a variety of factors, including a lack of legal assistance for those who cannot afford a lawyer, complex and time-consuming court processes and procedures (such as the requirement that most evidence must be given verbally in court and the use of a jury in criminal cases), and the increasing number and complexity of cases being brought before the courts.

Delays can cause many problems for those involved in a court case, including increasing the cost associated with taking the case to court, causing emotional stress and hardship for the parties and reducing the ability of the witnesses to accurately recall their evidence. In some instances, a **civil case** can take so long that people have to abandon their case because they cannot afford to pay the money that the legal system requires.

Check your learning 16.4

Remember and understand

1 State three groups of people who may be particularly disadvantaged when dealing with the police and court system. Give reasons for your choice.

2 Explain three ways that court delays can lead to injustices for parties involved in a criminal or civil case.

Apply and analyse

3 Explain the concept of trial by media. Undertake some Internet research to find an Australian criminal case that has attracted a large amount of media interest.
   - a Outline the facts of the case and reasons why you think it received such intense media commentary.
   - b Explain how the media coverage could have influenced the ability of the accused to receive a fair trial.

Evaluate and create

4 Read the case study 'Victim's mother fights for justice' and undertake some Internet research into the Josh Warneke case to answer the following questions.
   - a Outline the basic facts of the case, including basic details of the incident, charges and sentence imposed upon Mr Gibson.
   - b Explain why Ms Bishop believes that Mr Gibson did not kill her son, despite Mr Gibson being sentenced by the court.
   - c Explain some of the factors that may have contributed to Mr Gibson not receiving a fair hearing or trial.
   - d Explain the outcome of any appeal case.

16A rich task

Social media and the right to a fair trial

In a criminal trial, a jury of 12 randomly selected citizens determines the verdict as to whether or not the accused is innocent or guilty. One benefit of having a jury of 12 ordinary people determine the verdict, rather than a single judge, is that they will be able to reflect a range of different views and values in their discussions and deliberations. Similarly, it is argued that it is fairer for the accused to be judged by their peers or a group of independent 'everyday people', rather than a legal authority.

People who oppose the use of a jury, however, argue that jury trials can be unfair because individual jurors cannot be prevented from conducting their own online research into the case they are hearing and finding information that may cause them to develop a bias against the accused. For example, in 2015, a Victorian judge had to abandon a trial that had been running for five weeks after it was discovered that two of the jurors had used the internet to research information about the accused. Similarly, in 2015, former television star Robert Hughes, who had been found guilty of various sexual and indecent assault charges dating back to the 1980s, lodged an appeal because he believed the massive media coverage surrounding his trial (including a huge amount of false and vicious social media commentary) would have caused the jury to be unfairly biased against him. The problem with jurors conducting their own research into a case is that the internet and social media are often flooded with false information or unproven opinions. A juror may be biased by what they read, believing it to be true, although there is no actual evidence provided.

Source 1 People who oppose the jury system in criminal trials argue that social media platforms, such as Twitter, Facebook, Snapchat and Instagram, are threatening the right to a fair trial because information on court cases is now so freely available to members of the jury.

skill**drill**

Preparing a written critical evaluation of information and ideas

Being able to critically evaluate information and ideas is a key skill. Critically evaluating something involves the following steps:

Step 1 Examine evidence from a wide range of sources about an issue.

Step 2 Review evidence that should come from sources that both agree with and contradict an argument on the issue.

Step 3 Decide to what extent a statement or findings within a piece of research are true, or to what extent you agree with them.

Step 4 Finally, reach a conclusion or verdict based on what you judge to be the most important factors, and justify how you have made your choice.

Critical evaluation enables us to gain an understanding of views and opinions that may be different from our own, and develop empathy for people who hold and express different beliefs and values. Having the ability to consider different perspectives also enables us to expand our perceptions and make more informed judgements.

When preparing a written critical evaluation, you must provide more than an explanation of the information or ideas – you must identify the key features of the material and issues, and assess their relative merits by explaining the associated strengths and weaknesses. You should also provide a concluding statement, which can include your own opinion.

The table in Source 2 outlines the steps involved in preparing a written analysis or critical evaluation of a controversial issue.

Myspace
Vimeo
Skype
YouTube
LinkedIn
Tumblr
Facebook
Instagram
Twitter

	What you need to do	How to do it
Step 1 Gather relevant information	Gather a range of relevant information from a variety of sources that will enable you to examine the arguments *in support of* and *against* the proposition or issue.	The internet is a great place to commence researching a controversial issue and gathering relevant information, although you always need to check the authenticity of the material you have gathered. Ask yourself 'Where did this information come from?', 'Is it a reliable source?', and 'Why was the information created?'
Step 2 Write an introduction	Examine your information and prepare a written introduction that outlines the issue you are examining.	Your introduction should state and explain the issue and provide any relevant background information, such as why the issue has become controversial.
Step 3 Prepare the body of your response	The body of your response should include an examination of the key strengths and weaknesses associated with the issue.	It is best to examine one strength at a time, providing a corresponding weakness (as appropriate), rather than presenting separate lists of strengths and weaknesses. Also provide any relevant information, such as case studies, statistics or quotes, to support each viewpoint.
Step 4 Write a conclusion	After considering the different views and perspectives surrounding the issue, provide a conclusion.	Your conclusion should summarise the key points and include your own view based on the supporting evidence you have provided.

Source 2 Steps to write a critical evaluation

Apply the skill

1 Prepare a written report (of around 500 words) that critically evaluates the following contention: 'The increasing use of the internet and social media threatens the ability of jurors to remain impartial or unbiased. As such, juries should be abolished in all criminal trials.' Prepare your written response by following the steps in the table.

Extend your understanding

1 Conduct an Internet search using key terms and phrases such as 'Does social media influence the jury (or a fair trial)?' and 'Strengths and weaknesses of the jury system'. Gather information about varying opinions on the issue, and come to your own conclusions by making a critical evaluation. You could research a high-profile criminal trial, such as Brett Cowen or Robert Hughes, to justify your evaluation.

Source 3 High profile court cases, such as the trial of Brett Cowen, who was found guilty of murdering Queensland schoolboy Daniel Morcombe, attract great attention both in the mainstream media and on social media.

16.5 Types of legal disputes

The Australian legal system includes a range of bodies or institutions, known as courts, to resolve legal disputes that may arise between individuals and the government. These courts are overseen or presided over by independent magistrates and judges who are able to listen to both sides of a dispute and make a fair and unbiased decision.

The main two types of legal disputes heard in Australian courts are criminal and civil cases. Criminal cases are those that involve an individual who has behaved in an unacceptable way being charged by the police and often receiving a sanction. Criminal cases include murder, assault and sexual offences. Civil cases, by contrast, involve private people or organisations fighting over an alleged breach of individual rights, such as an individual seeking money to make up for injuries they have suffered due to another person's careless action.

It is important to understand the difference between criminal and civil cases because different legal processes and procedures are used when resolving each type of case.

Criminal cases	Examples
Summary offences (minor crimes heard by a magistrate)	Minor theft and minor traffic offences – e.g. exceeding the speed limit, driving an unregistered car.
Indictable offences (serious crimes that require trial by a judge and jury)	Murder, arson, dangerous driving causing death, serious violent assault, rape, and drug-trafficking.
Civil cases	**Examples**
Matters involving disputes between individuals over an alleged breach of rights	• Negligence • Defamation • **Contract** law

Source 1 Examples of criminal and civil cases

Source 2 If you are found guilty of committing a crime, such as drink-driving, you may receive a punishment or penalty called a sanction.

Source 3 Theft is a summary offence, and would generally be heard in the Magistrates' Court.

Source 4 Indictable offences such as armed robbery are crimes heard in higher courts.

Criminal cases

Criminal cases are those in which an individual (referred to as the accused), who has committed an illegal act that inflicts harm on another individual and/or society, is taken to court (or **prosecuted**) by the state or government. If an accused is found or pleads guilty to committing a crime, they may receive a punishment or penalty. Types of criminal sanctions include monetary fines or imprisonment.

Types of criminal cases

Criminal offences – known commonly as crimes – are generally classified as being **summary** (or **simple**) **offences** or **indictable offences**.

Summary offences are minor crimes that are generally heard in the **Magistrates' Court** (called a local court in New South Wales). Common types of summary offences include theft, minor traffic offences, such as exceeding the speed limit, and minor unlawful assault.

Indictable offences are serious crimes that are generally heard in higher courts, such as the District Court and the Supreme Court. Indictable offences include armed robbery (stealing or attempting to steal property using force such as a gun), drug trafficking, serious sexual offences, dangerous driving causing death, and murder. Cases in which an accused **pleads** not guilty to an indictable offence are generally heard before a judge and jury of twelve persons. The jury determines the verdict as to whether or not the accused is guilty and the judge determines the sanction (or punishment).

Civil cases

Civil cases involve disputes between individuals (or groups) over an alleged breach of individual rights. In a civil case, the party who believes their rights have been infringed (referred to as the **plaintiff**) takes the case to court in the hope of receiving a **remedy** that will restore them, as far as possible, to the position they were in prior to the wrongdoing. The most common type of civil remedy is a plaintiff being awarded a sum of money to compensate for their loss (referred to as **damages**).

Types of civil cases

While there are many different types of civil cases, perhaps the most common is a **negligence** action. This is where an individual claims they have suffered injury due to another person's failure to take reasonable care when there is a responsibility to do so. Other types of civil cases include disputes over a **breach of contract**, where one individual believes another has failed to carry out the terms of a legally binding contract, and **defamation** cases, where a person believes they have suffered harm (for example, a loss of reputation) due to another person making false statements publicly.

Source 5 It is often neccessary to engage a barrister to plead on your behalf if a civil case needs to proceed to the courts.

case**study**

Can using social media be a crime?

In 2013, Andrew Farley – a former school student – was ordered by a NSW District Court judge to pay $105 000 in damages to a music teacher after making false and defamatory comments about her on Twitter. Despite being warned against it, Mr Farley posted the damaging statements on Twitter because he incorrectly believed the teacher involved was responsible for his father, also a music teacher at the school, losing his job. The case was the first in Australia involving defamation via Twitter, and made it clear that it is unacceptable to use Twitter, Facebook and other forms of social media to make false and defamatory statements about others.

Twitter
twitter.com
new Twitter experience is coming! Learn
twitter

Source 6 Private individuals in Australia are subject to defamation law on social media, which includes defaming someone on Twitter.

casestudy

Are sentences too lenient?

In August 2015, Jamie McPherson, aged 70 years, was charged with two counts of culpable driving causing death. He started and continued a dangerous car chase, which led to two brothers in another vehicle being killed when their car crashed into a tree. When imposing the sentence, the judge said that McPherson had started the dangerous car chase to deliberately terrorise another person and had shown no remorse for his actions. He then sentenced McPherson to eight years' imprisonment, with a minimum of five years to be spent in prison before being eligible to be released.

In Western Australia, a person who is guilty of culpable driving causing death (e.g. causing the death of a person by driving in a very careless or reckless manner or while under the influence of drugs or alcohol) can be imprisoned.

Source 7 Culpable driving causing death is a serious indictable offence.

Check your learning 16.5

Remember and understand

1 In your own words, explain the difference between criminal and civil cases.

2 Define the two main types of criminal cases.

3 Explain two types of civil cases.

4 Explain the key difference between a sanction and a remedy. Provide one example of each to support your response.

Apply and analyse

5 Read the two case studies and complete the following tasks for each:

 a Decide whether the case is criminal or civil, giving reasons for your choice.

 b Discuss whether or not you believe the sanction handed down by the judge was appropriate.

Evaluate and create

6 Create a poster or collage that illustrates at least five different types of criminal offences and civil actions. You may wish to use software such as Picasa or Photovisi to create your poster.

7 Collect three articles that relate to recent criminal or civil court cases. Include at least one civil case. Summarise the facts of each case and state the key terms that indicate whether it is criminal or civil

16.6 Court jurisdictions

The Australian legal system provides a large range of courts and informal tribunals to resolve all types of legal disputes. Each state and territory within Australia has its own system of courts and tribunals that can hear matters arising within that state or territory. We also have federal courts, including the Family Court, High Court of Australia, Federal Court and Federal Circuit Court of Australia, to resolve a range of disputes concerning laws made by the Commonwealth Parliament.

The court hierarchy

The courts in each Australian state and territory are arranged in a **hierarchy**, meaning they are ranked in order of importance from lowest to highest according to the seriousness of the cases they can hear. For example, the lowest court in each state and territory court hierarchy is the Magistrates' Court (or Local Court in NSW). These courts hear all minor criminal and civil cases. The highest court in each state and territory **court hierarchy** is the Supreme Court, which hears the most serious cases, such as murder. The High Court of Australia is the highest federal court and can hear a range of important cases including appeals from Supreme Courts in each state and territory.

The courts in each state and territory are arranged in a court hierarchy to enable the Australian court system to operate more effectively. For example, having courts ranked from lowest to highest allows each court to specialise in hearing certain types of cases. This enables the court personnel – including judges, magistrates and administrative officers – to develop their expertise in hearing certain types of cases. It also allows streamlining of court procedures.

Having the courts arranged in a hierarchy also allows for an appeals process to exist, where higher courts can review the decisions of lower courts. It also helps make sure that court decisions are consistent and predictable because magistrates and judges in lower courts can follow the decisions of judges in higher courts.

State and territory courts

Each Australian state and territory has its own system of courts and tribunals. These hear cases involving a breach of state and territory laws, as well as some specified federal matters. Each state in Australia has three levels of courts – superior, intermediate and lower – with the exception of Tasmania, the Northern Territory and the Australia Capital Territory, which only have a lower and superior level of court.

FEDERAL COURTS (all Australian states and territories)								
High Court								
Federal Court								
Family Court (In Western Australia, this is replaced by the state-based Family Court of Western Australia)								
Federal Circuit Court								
STATE COURTS							TERRITORY COURTS	
	WA	NSW	VIC	QLD	SA	TAS	ACT	NT
Superior courts	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court	Supreme Court
Intermediate courts	District Court	District Court	County Court	District Court	District Court			
Lower courts	Magistrates' Court	Local Court	Magistrates' Court	Magistrates' Court	Magistrates' Court	Magistrates' Court	Magistrates' Court	Magistrates' Court

Source 1 The Australian Court hierarchy

Superior courts

Each state and territory in Australia has a Supreme Court, which generally specialises in hearing the most serious criminal matters, such as murder. They also hear the most complex civil matters, or those involving very large amounts of money. Each Supreme Court also has an appeal division – a **Supreme Court of Appeal** – which hears appeals from the District or County and Supreme Courts. Three judges generally hear cases in the Supreme Courts of Appeal. The High Court of Australia has the power, or **jurisdiction**, to hear appeals from the state and territory Supreme Courts of Appeal.

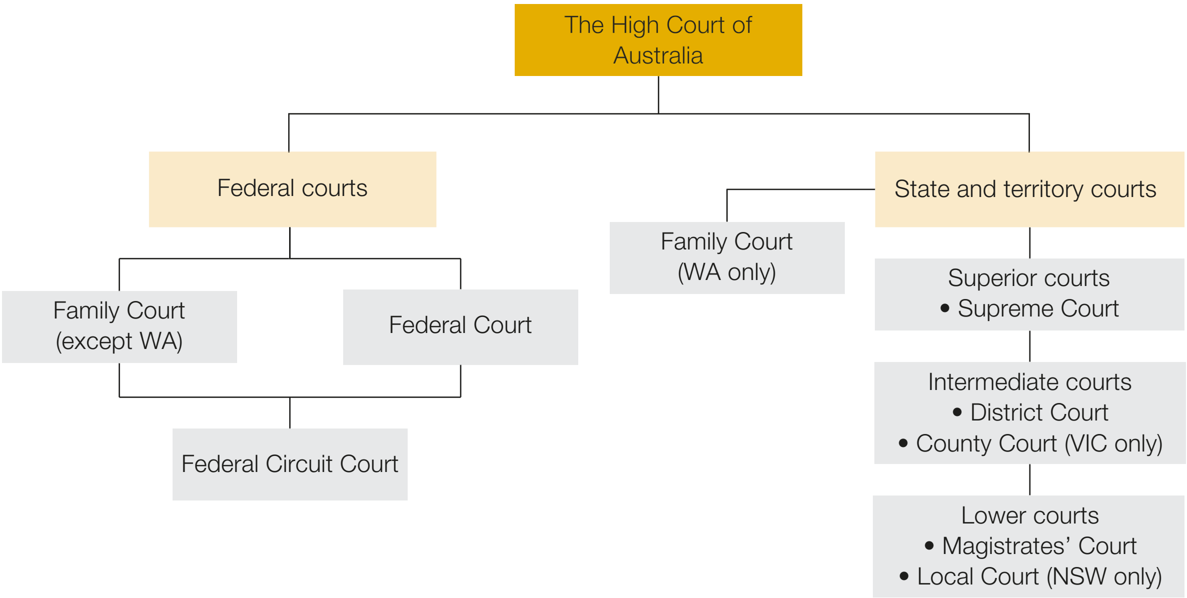
Intermediate courts

Intermediate courts, referred to as District (or County) courts, generally hear all serious criminal cases except murder and attempted murder, and serious civil cases involving amounts over $100 000. They also have the power to hear certain types of appeals from the Magistrates' (or Local Courts), such as appeals against the severity or leniency of a sentence imposed. In serious criminal trials where the accused pleads not guilty, a jury of 12 will usually be used to determine the verdict while the judge determines the sanction.

Lower courts

The lowest court in each state and territory hierarchy is called the Magistrates' Court (called the Local Court in New South Wales). These courts mainly hear minor criminal offences and civil cases involving amounts under $75 000. The Magistrates' or Local Courts are the busiest courts in Australia, because most legal cases involve minor criminal offences, such as minor theft and traffic offences. For example, the Western Australian Magistrates' Court, which operates in over 25 locations throughout the state, hears approximately 95 per cent all criminal matters in the state or around 100 000 criminal cases per year.

Source 2 The High Court of Australia in Canberra is Australia's highest federal court (see Source 3).


The High Court of Australia
Federal courts
State and territory courts
Family Court (WA only)
Family Court (except WA)
Federal Court
Federal Circuit Court
Superior courts
• Supreme Court
Intermediate courts
• District Court
• County Court (VIC only)
Lower courts
• Magistrates' Court
• Local Court (NSW only)

Source 3 Australia's federal and state/territory court hierarchy

Federal courts

In addition to the state and territory courts, Australia has four federal courts to hear and determine matters involving laws made by the Commonwealth Parliament – the High Court of Australia, the Family Court of Australia, the Federal Court of Australia, and the Federal Circuit Court of Australia.

The High Court of Australia

The High Court of Australia is probably the most well known federal court, sitting on top of each of the state and territory court hierarchies (see Source 3). The High Court, which first sat in 1903, has the power to hear many cases. This includes appeals from any state or territory Supreme Court of Appeal and the High Court itself. It can also hear cases involving disputes over interpretations of the Australian Constitution, and any case of significant legal importance.

The Family Court of Australia

The Family Court was created in 1975 to specialise in hearing cases relating to marriage and divorce disputes. For example, the court hears cases relating to disputes over parenting and property settlement and cases involving whether or not a marriage is valid under Australian law. Western Australia has its own state-based Family Court to hear these types of cases (see page 502).

The Federal Court

The Federal Court was created in 1976 to hear most civil disputes involving Commonwealth law. These include matters involving industrial relations or the workplace, native title claims (disputes over the granting of land rights to Aboriginal and Torres Strait Islander peoples), copyright, trade practices and immigration issues. It can also hear appeals from various courts and tribunals throughout Australia.

The Federal Circuit Court of Australia

The Federal Circuit Court of Australia (formerly called the Federal Magistrates' Court) was created in 1999 to ease the workload of the Federal and Family Courts and provide a simple and more assessable alternative to the Federal Court. It hears a range of disputes including those involving family law and child support, **human rights**, copyright and privacy matters.

Source 4 The Family Court of Australia (Lionel Bowen Building), Sydney

case**study**

Coles fined for misleading consumers

In 2014, a Federal Court judge ruled that Coles Supermarkets had broken Australian consumer laws that prevent businesses from misleading or deceiving the public. This was done by promoting their bread as being 'freshly baked' and 'baked today, sold today' when the bread had actually been partly baked by the supplier and 'finished off' in Coles stores on the day of sale. Coles was ordered to pay a fine of $2.5 million.

case**study**

Norrie's Case – does a person have to declare their gender?

In 2010, 'Norrie' – a 52 year-old Sydney person who does not identify as being either male or female – became the first person to be formally registered with the New South Wales Registry of Births, Deaths and Marriages as 'sex not specified'. A few months after the registration, however, Norrie received notification that it had been 'issued in error' and was not legally valid.

After unsuccessful attempts to have the registry's original acceptance of Norrie's registration status reinstated, Norrie lodged a successful appeal at the NSW Supreme Court of Appeal. Three judges unanimously agreed that people should be able to have a 'gender neutral status', meaning they not be required to identify themselves as either male or female.

The NSW Registry of Births, Deaths and Marriages, however, refused to accept this decision and lodged a final appeal to the High Court of Australia. In 2014, the High Court dismissed the appeal, and upheld the decision of the NSW Supreme Court of Appeal, ruling that the sex of an individual is generally irrelevant to most legal relations, with the exception of the current marriage laws that prohibit same-sex marriage.

Source 5 Norrie won a High Court case and became the first person not required to specify a gender with the NSW Registry of Births, Deaths and Marriages.

Check your learning 16.6

Remember and understand

1 Define the term 'court hierarchy'.

2 Explain two reasons that courts in Australia are ranked in a hierarchy.

3 Briefly outline the role of the Family Court of Australia.

Apply and analyse

4 Read the case study 'Norrie's Case' and complete the following tasks.
  a Decide whether the case is criminal or civil. Give reasons for your choice.
  b Identify the name of the courts involved and explain what type of cases they generally hear.
  c Explain why Norrie took this case to court and comment on the final decision.

Evaluate and create

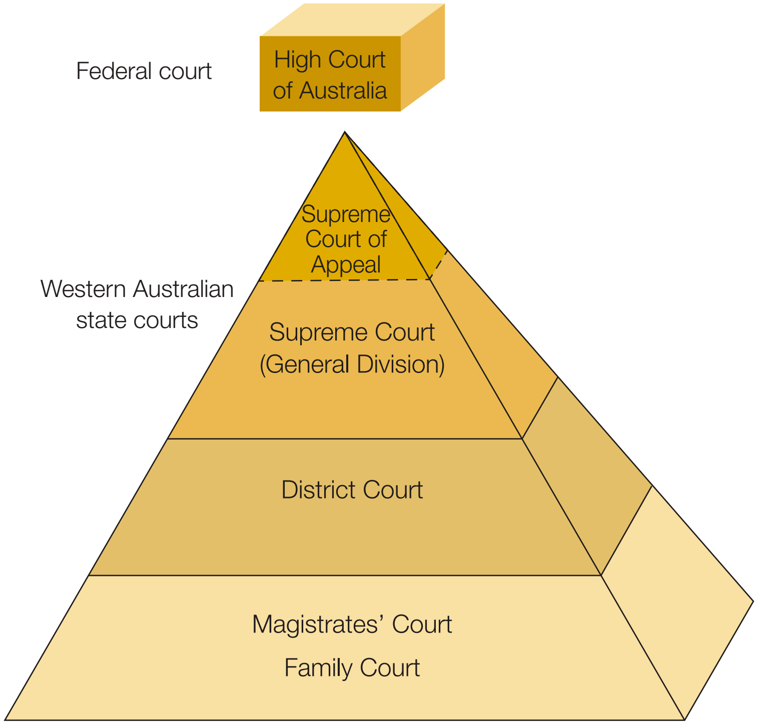
5 Using the Internet, conduct research into your state or territory's courts system.
  a Create a flow chart that illustrates the court hierarchy.
  b State the name of three courts that exist in your state or territory and briefly explain the role and types of cases that can be heard in each court.

6 Collect one article that refers to a case or matter being heard in each of the courts in your hierarchy and summarise the facts of each case. Where possible, comment on whether or not you think the outcome of the case was fair.

16.7 The Western Australian court hierarchy

The Western Australian court hierarchy is made up of a number of courts, each of which has the power to hear certain types of cases. For example, the Magistrates' Court, which is the lowest ranked court in the hierarchy, mainly hears and resolves minor disputes such as minor theft and traffic offences. By contrast, the Supreme Court of Western Australia, divided into the General Division and the Court of Appeal, is the most superior Western Australian state court, and hears and resolves the most serious cases, such as murder and attempted murder cases.

Western Australia is also the only state in Australia to have its own state-based family court, which hears matters such as divorce, child custody and adoption.



Source 1 The Western Australian court hierarchy

The Magistrates' Court

While the Magistrates' Court is the lowest court in the state court hierarchy, it is also the busiest, due to the large range of cases it can hear and the fact that the majority of legal disputes are relatively minor. For example, the Magistrates' Court deals with approximately 95 per cent of the state's criminal cases, or around 100 000 criminal cases per year.

The Magistrates' Court has the power, or jurisdiction, to hear and determine a wide range of cases including:

- all minor criminal matters, referred to as 'simple offences', (for example minor theft, property damage and assault; traffic offences like driving a vehicle whilst being disqualified and driving over the speed limit)
- civil disputes where the amount of money involved does not exceed $75 000.

All cases in the Magistrates' Court are held before, or presided over by, a single magistrate (there is no jury). Also, being the lowest court in the Western Australian court hierarchy, the Magistrates' Court cannot hear appeals – that is, it cannot review decisions from any lower courts.

Source 2 The Perth Magistrates' Court

Source 3 The Perth District Court

The District Court

The District Court of Western Australia is the intermediate tier in the Western Australian court hierarchy and hears approximately 7500 criminal and civil cases each year. The District Court has the power to hear:

- all indictable or serious criminal offences except those where the maximum term of imprisonment that can be imposed is life (such as murder and murder-related offences). This means the District Court can hear a wide range of criminal cases, including serious theft, armed robbery (theft using a weapon), illicit drug offences (for example, trafficking or selling illegal drugs), sexual assault, fraud, and culpable driving causing death (where a person has caused the death of another due to driving in a very careless of reckless manner, or while under the influence of drugs or alcohol).
- a range of civil disputes. For example, the District Court can hear civil disputes for an unlimited amount of money in cases where the claim relates to personal injuries and injury sustained in motor vehicle accidents. This may include negligence cases where an individual has suffered injuries as a result of another's careless behaviour, and claims made for workplace injuries. The court can also hear civil matters involving commercial or business dealings and debt recovery, but only for amounts up to $750 000.

The District Court also has the power to hear civil appeals from the Magistrates' Court.

The Supreme Court

The Supreme Court of Western Australia is the highest court in the Western Australian court hierarchy, and consists of two divisions: the General Division and the Court of Appeal.

Supreme Court (General Division)

The Supreme Court (General Division) has the power to hear:

- all indictable or serious criminal offences, but generally hears the most serious cases such as murder, armed robbery, and serious drug offences (for example, major illicit drug-trafficking cases)
- civil disputes involving an unlimited amount of money (for example, the court generally hears cases over involving amounts over $750 000 or serious and complex legal issues).

Supreme Court of Appeal

The Supreme Court of Appeal has the power to hear all appeals (review decisions) from decisions made by single judges in the Supreme Court (General Division) and lower courts – although an appeal can only be lodged if a party has a good reason or reasonable grounds.

If a party wishes to appeal a decision made by the Supreme Court of Appeal, they can apply to have the case heard and reviewed by the High Court of Australia, which has the power to hear all appeals from each state's and territory's Supreme Courts of Appeal. The High Court, however, does not hear many appeals and so a party must provide very strong grounds or exceptional reasons for lodging the appeal.

Who makes the decisions in the District and Supreme courts?

In general, all criminal cases heard in the District Court and Supreme Court (General Division) – referred to as trials – where the accused pleads not guilty, are heard before a judge and jury. The jury is composed of 12 randomly selected citizens, and determines the verdict (the guilt or innocence of the accused), while the judge determines the sanction (or punishment) to be imposed upon the accused if they are found guilty.

On occasion, a criminal matter may be heard in the District or Supreme Court (General Division) without a jury. Such cases are referred to as 'judge alone' trials and only occur in rare cases, for example, where the accused might have a very good reason to believe a jury may be biased against them or in cases where the court believes the complexity or length of a trial may place too much pressure and stress on a potential jury.

In cases where the accused pleads guilty, there is no need for a jury and the judge simply listens to the facts of the case and determines the sanction to be imposed – for example, the amount of the fine or length of the term of imprisonment.

All civil trials heard in the District Court and the Supreme Court (General Division) are heard and determined by a single judge.

A single judge hears and determines all appeals in the Supreme Court (General Division) and usually three judges hear and determine all appeals in the Supreme Court of Appeal, although some matters can be heard by a single judge or two judges.

Source 4 The Supreme Court of Western Australia

The Family Court

Western Australia is the only Australian state to have its own Family Court to deal specifically with family law-related matters – in all other states, family law disputes are generally heard by the Family Court of Australia (a federal court set up by the Commonwealth parliament in 1975).

One benefit of having a state-based Family Court is that it can deal with a broader range of family matters. For example, the Family Court of Western Australia can hear:

- all matters usually heard by the Family Court of Australia, such as those relating to marriage and divorce – including property disputes arising from a divorce and parenting disputes arising from a divorce or separation of de facto (unmarried) couples
- other family matters not heard by the Family Court of Australia, for example, disputes between separated and de facto (unmarried) couples over property and matters involving adoption and surrogacy arrangements.

This means that all family matters can be heard by the one state court and all parties can have access to the same counselling and support services (such as interpreters and child minding) provided by the court.

Check your learning 16.7

Remember and understand

1 Prepare a table (similar to the one provided below) that describes the jurisdiction (i.e. types of cases heard) by the following Western Australian state courts: the Magistrates' Court, District Court, Supreme Court (General Division) and the Supreme Court of Appeal.

2 Outline who determines the verdict and who determines the sanction in a criminal trial heard in the District or Supreme (General Division) courts.

3 **a** State three examples of crimes that can be heard in the Magistrates' Court.
   b Suggest one reason why a person may wish to lodge an appeal against a decision of a magistrate.

4 What role does the Family Court have in Western Australia?

Apply and analyse

5 Decide whether each of the following is a criminal or civil case and identify which court would hear the case.
   a Jack is charged with using offensive language in a public place and intends to plead guilty.
   b Gemma has pleaded guilty to receiving stolen goods valued at $60000.
   c Grant has pleaded not guilty to murder, claiming he stabbed an armed intruder in self-defence.
   d Joshua has pleaded guilty to selling a large amount of illegal drugs.
   e Ashley has pleaded guilty to a speeding offence after driving at 80 km per hour in a 40 km per hour school zone.
   f Petra is suing a hospital, claiming a surgeon carelessly performed a knee operation that left her unable to play professional tennis.
   g Ross has pleaded guilty to culpable driving causing death, after colliding with and killing a pedestrian while driving a vehicle under the influence of alcohol. Shortly after the crash he registered a blood alcohol concentration (BAC reading) of 0.13.
   h Veda is suing her local café for $80 000 to make up for the severe stomach injuries she suffered as a result of swallowing a broken toothpick left in a sandwich.

Evaluate and create

6 Research one court in the Western Australian state court hierarchy and prepare a PowerPoint presentation that outlines some of the main features or roles of that court. For example, you may wish to outline what types of cases the court can hear, who determines the outcome in each case, some of the key personnel who work at the court, and where the court is located. Remember to use some visuals for interest in your presentation.

7 Use either print or online media to find one article about a case being heard in two of the courts in the Western Australian court hierarchy. Prepare a summary of the facts of each case and, where possible, comment upon whether or not you think the outcome of the case was fair. In the event the case has not concluded yet, suggest what the likely outcome may be.

Jurisdiction (or types of cases heard)	Magistrates' Court	District Court	Supreme Court (General Division)	Supreme Court of Appeal
Criminal				
Civil				
Appeals				

16.8 The role of the courts

In Australia, most laws are made by parliament. In fact, the main role of the state and federal parliaments is to make laws (called legislation or statutes) on behalf of society. By contrast, the main role of the courts is to apply and interpret the meaning of any existing law to resolve disputes that are bought before them. Courts can, however, also make law in certain situations.

Courts making law by setting precedent

Courts or judges can make law when they are called upon to resolve a dispute in which there is no existing law – that is, no existing parliamentary legislation or court-made law – that can be applied to resolve the dispute at hand. In such cases, the judge must come to their own decision regarding the outcome and their decision may then become judge-made law or a **precedent**.

In simple terms, a precedent is a decision or legal principle made by a judge. It must be followed by all lower courts, within the same court hierarchy, in cases where the underlying facts are similar. For example, judges and magistrates in the lower courts in each state or territory must follow decisions or legal principles made by judges in the higher courts (such as the Supreme Court and High Court). This ensures that the laws made by courts are consistent and predictable.

Allowing the courts to make law by setting precedent also allows the law to develop over time. For example, the law of negligence has largely developed through judges making decisions in cases where there was no existing legislation that could be applied to resolve a dispute at hand. In fact, Australian negligence law was first established in the mid 1930s, in the famous case of *Grant v Australian Knitting Mills* [1936]. In the absence of any parliamentary legislation, a judge ruled that the manufacturers (in this case, the Australian Knitting Mills) owed consumers a reasonable duty of care not to produce faulty and harmful products. This ruling was made after a consumer (Grant) developed a severe skin rash from wearing some faulty and carelessly produced underwear, similar to a 'onesie'. Since this case, many more cases involving negligence claims have been taken to Australian courts and the law of negligence has continued to develop.

Source 1 Could your sleepwear be involved in a negligence case?

Courts making law through statutory interpretation

Judges also are able to make law through the process of **statutory interpretation.** Statutory interpretation is when a judge is called to resolve a dispute in which there is existing legislation (or parliamentary law) but the wording of the legislation is unclear, and needs to be interpreted or given meaning by the judge before it can be applied to resolve the case at hand. For example, in the 'Kevin and Jennifer' case (2003), three Family Court judges were required to interpret the meaning of the word 'man' when a dispute arose over whether a marriage between a woman who had undergone a sex change (to become a man) and another woman was valid under Australian law (which states that a legally valid marriage can only take place between a man and a woman). The court interpreted that a post-operative female-to-male transsexual was a 'man' and declared the marriage valid. The court's interpretation clarified the meaning of a 'man' for the purposes of Australia's marriage laws and enabled the legislation to be applied to resolve the case and also set a precedent.

casestudy

Can a slippery chip earn you $500 000?

In 2012, the High Court of Australia set a precedent when it resolved an eight-year dispute between Kathryn Strong and Woolworths supermarket chain over injuries Ms Strong incurred when she slipped on a greasy patch on the floor outside a Woolworth's supermarket. The court had to determine whether or not Woolworths had most likely been careless and breached their duty of reasonable care by failing to adequately inspect the floor and remove a greasy spot left from a hot chip dropped in a sales area directly outside their supermarket entrance. Ms Strong, who was walking on crutches at the time, slipped on the greasy spot and severely injured her spine.

The High Court judges agreed with the judge in the original District Court by ruling that Woolworths was responsible for Ms Strong's injury and awarded her over $580 000 in damages to compensate for her losses. In making the decision, the High Court set a broad precedent that it was reasonable for supermarkets and other stores to inspect and clean floors located near food courts and in high traffic areas every 20 minutes.

Woolworths

Source 2 Kathryn Strong was awarded over $580 000 after slipping on a greasy hot chip patch at the entrance of her local supermarket.

Check your learning 16.8

Remember and understand

1 Distinguish between the main role of parliament and the main role of the courts.

2 Explain two situations in which courts or judges can make law.

3 What is a precedent? Explain how judges make law by setting precedents.

4 Suggest two reasons why legislation or laws made by parliament may need interpreting by the court before they can be applied to resolve a case.

Apply and analyse

5 Read the case study, *Strong v Woolworths Limited* [2012] HCA 5, and complete the following tasks:

   a Explain whether the case is a criminal or civil case.

   b Outline the basic facts of the case and comment on whether or not you agree with the precedent set by the High Court.

Evaluate and create

6 Research one of the following Australian court cases and prepare a summary that outlines the facts of the case and the decision or law made by the court.

   - *Davies v Waldron* [1989] VR 449
   - *Deing v Tarola* [1993] 2 VR 163
   - *Rosenberg v Percival* [2001] 205 CLR 434
   - *Cole v South Tweed Heads Rugby League Football Club Ltd* [2004] HCA 29

16B rich task

Marriage equality and the law

In October 2013, the Australian Capital Territory parliament passed legislation, the *Marriage Equality (Same Sex) Act 2013*, to legalise same-sex marriage in the ACT. However, only a few days after it came into effect, the law was declared invalid by the High Court on the grounds that it conflicted with existing Commonwealth marriage laws that require marriages in Australia to be between a man and a woman.

Source 1 Same-sex couples were able to legally marry in the ACT for five days in 2013 before the High Court of Australia declared the newly implemented law invalid.

The passing of the ACT legislation demonstrated the growing support within Australia to follow other countries and legalise same-sex marriage. In 2015, the United States of America became one of 20 other nations to legalise same-sex marriage, joining countries such as the Netherlands, Belgium, Spain, Canada, South Africa, Norway, Sweden, Portugal, Iceland, Argentina, Denmark, Uruguay, New Zealand, France and Britain. Similarly, various national surveys have indicated that 65–70 per cent of Australians support same-sex marriage, with approximately 75–80 per cent believing that legal change is inevitable.

One of the main reasons why many individuals and groups support the legalisation of same-sex marriage in Australia is that it is consistent with the basic principle that underpins our legal system, that ‘all people should be treated equally before the law’. This would give same-sex couples the same legal rights that derive from being married, including having the same access to adoption, as heterosexual married couples receive. Many people also believe that allowing same-sex marriage might help to reduce the unacceptable negative stigma often associated with being gay and to promote tolerance and understanding within the community.

Conversely, those who oppose same-sex marriage on a range of social, religious, political and legal grounds, often argue they act to support the rights of children. They argue a child has a right to have a mother and a father, believing that marriage should remain a cultural institution based upon the basic biological principle that a man and a woman are the ‘natural’ creators of life and reproduction. Similarly, some argue that legalising same-sex marriage may make it more difficult to deny other groups, such as polygamists – who support being legally able to be married to more than one person at a time – the right to marry.

SAY NO TO HOMOPHOBIA
FIX MARRIAGE NOT GAYS

Source 2 Various protests have taken place in support for and against legalising same-sex marriage.

skill**drill**

Analysing different points of view

Being able to gather, analyse, and interpret information is a key skill that enables us to gain an understanding of views and opinions that may be different from our own. It helps us to develop empathy for people who hold and express different beliefs and values. Having the ability to consider different perspectives also enables us to expand our perceptions and make more informed judgements.

When you are required to analyse a controversial issue, you need to consider a range of different viewpoints related to the issue. You also need to attempt to understand the values, morals, motivations and contexts that underpin these different opinions and perspectives.

To analyse different viewpoints in relation to a controversial issue – such as whether or not the Australian marriage laws should be altered to legally recognise same-sex marriage – follow these steps.

Step 1 Identify the issue you are going to examine.

Step 2 Gather sources from a range of difference places. For example, articles from different websites or a range of newspapers. Make sure they are not all written by the same person.

Step 3 Identify each author's viewpoint. For example, do they support or are they against the legal recognition of same-sex marriages?

Step 4 Identify each author's motivation for their viewpoint. Ask yourself what their motivation might be for taking this position. For example, are they writing on behalf of a specific group or political party that have a particular stance on the issue? Do they belong to a group affected by the issue?

Step 5 Question the context in which the article was written. Consider when it was written and the predominant values and morals that existed at the time. Ask yourself, has any of the information provided changed over time? Also consider the background of the author and whether or not their views might have been biased by their culture, heritage or religious beliefs.

Step 6 Decide whether each author has sufficiently justified their opinion, and form your own opinion based on your readings.

Apply the skill

1 Using the internet and other forms of media, collect information from two different sources that support the legalisation of same-sex marriage in Australia. You might use newspaper or journal articles, media broadcasts and transcripts, the websites of political parties or other religious and social organisations. Also collect information from two different sources that oppose the introduction of same-sex marriage.

For each source of information provide:

a a summary of the author's viewpoint on the issue

b a short statement (100 words) that discusses any values, morals, motivations and context that underpin each source of information.

2 After you have examined your four sources of information, prepare a summary of the main reasons for and against the legalisation of same-sex marriage. Provide a concluding statement that outlines your personal view on the topic.

Extend your understanding

1 Identify another controversial issue in the media, such as lowering the speed limit, or raising the legal drinking age to 21. In pairs, research your topic and make an analysis of different sources. Have each member of the pair present the 'pros' and 'cons' of the issue to the class, explaining the justification for why different people have a range of opinions about it.

Glossary: Geography

A

Agricultural Revolution, the a period of gradual change to the agricultural system that began in Britain in the 18th century, and included the introduction of new techniques and machinery in farming

annotate to add notes which explain, comment or clarify

aquifer an underground water supply consisting of a layer of rock or other permeable materials that contains water

arable a word used to describe land that is suitable for growing crops

armed conflict war between different countries, or civil war between groups within a single country

B

bar graph a graph that shows information as a series of horizontal bars

biodiversity the variety of life in a particular area or biome

biofuel a fuel that is produced directly from a living or recently living organism such as plant or animal waste

biome a large area of the Earth that is home to similar plant and animal communities that are adapted to that particular environment (e.g. desert or forest)

BOLTSS a mnemonic (memory device) for remembering the essentials of a map: border, orientation, legend, title, scale and source

boreal forest the coniferous forest biome, dominated by fir, spruce and pine trees

C

calorie a unit used to measure the energy in food

cartogram a map that is distorted to show a representation of a value rather than land area

change a key concept in geography: the dynamic nature of all processes on Earth, whether slow or fast, small or large

choropleth map a map that shows particular data or characteristics, such as population density, by shading regions in variations of one colour (e.g. light green through to dark green)

climate change long-term significant change in the Earth's weather, including variations in rainfall and wind patterns, regional changes, and particularly the increased average atmospheric temperature

climate graph a combination bar and line graph that shows the rainfall and temperature of a given place; also known as a climograph

complex map a type of map that contains more than one set of information

compound column graph a column graph that has subdivided columns for further comparison

coniferous forest a type of forest comprised of conifer trees, sometimes called a boreal forest

conservation agriculture a type of agriculture that uses farming methods that seek to cause minimum disturbance to the natural environment, conserve resources and complement natural processes

contour lines lines drawn on a map that connect points at the same height to show the height and steepness of land

crop yield the amount of crop (in kilograms) that is grown per hectare

CSIRO Commonwealth Scientific and Industrial Research Organisation, Australia's national science agency

cultural (adjective) relating to the shared characteristics of a group of people

D

deforestation the cutting down of trees and other plant life in a forest

desert a dry region of the Earth with little vegetation or rainfall, but experiencing extreme temperatures

desertification the transformation of fertile land into relatively dry desert areas

developed country an industrialised country with a well-developed economy capable of supporting its own people

developing country a non-industrialised country with a lower living standard, and lower Human Development Index ranking than other countries

direction a way of orienting a map, usually shown by the use of compass points, such as north

digital divide the unequal levels of access that people in different countries have to communication technologies like the Internet and mobile network coverage

digital terrain model a topographic illustration that uses digital data to create a side view of the elevation of an area

E

economic (adjective) relating to employment, income and trade

ecosystem abbreviation for 'ecological system', a complex community made up of living organisms that interact with each other and with their environment

ecosystem services the important benefits that healthy ecosystems provide to humans; includes the service of providing (e.g. food and water) and regulating (e.g. purifying air and water)

ecotourism a form of tourism that involves visiting a natural environment with the aim of observing, experiencing and learning about it while conserving and supporting the environment and its inhabitants

environment a key concept in geography: a specific place on Earth and all the things, both animate and inanimate, that are there

erosion the wearing away of the Earth's surface by wind, water or ice

extensive farming a type of farming that requires large areas of land, for example dairy farming, which needs to provide grazing land for cattle

extraction the process of taking raw materials from the Earth; includes activities such as mining

F

false colour image an image that uses colours that are different or more exaggerated than those which occur naturally, in order to make it easier to interpret

famine widespread shortage of food

fertility rate the average number of children women in a particular area or country will have throughout the course of their lives

fieldwork geographical study on location of the site of inquiry

flow diagram a diagram that shows the movement sequence or stages in a process

flow map a map that shows movement (such as people or goods) from one place to another

food accessibility having physical and economic access to enough food that can be reached by those who need it

food availability the state of people having enough food of appropriate quality consistently available

food insecurity a state where not everyone has consistent access to enough safe nutritious food to sustain a healthy life; the opposite of the state of food security

food loss the reduction in the amount of food from where it is produced to where it reaches the consumer

food security a state where all people at all times have access to enough safe nutritious food to sustain a healthy life

food waste food that is thrown out by a retailer or consumer

fossil fuel fuel that is made from the organic remains of organisms that have been dead for a long time

G

genetic modification a process by which scientists can change the genes of plants and animals to give them certain desirable traits

geographic diagram a simplified drawing of the real world

geographic information system (GIS) a map plus database system for navigation and information collection

geographic photograph a photograph that is taken to depict a place or particular feature of the landscape for the purpose of demonstrating an aspect that is being studied

geographic sketch a sketch focusing on those parts of the environment relevant to the geographic study; often completed in the field but sometimes from a photograph

Global Positioning System (GPS) a device that uses satellites to accurately pinpoint the location of a car or phone, and then utilises data in the form of a digital map to help us find our way around

global trade the buying and selling of goods, services, produce and capital between countries or territories across international borders

global warming the gradual rise in the overall atmospheric temperature of the Earth, believed to be caused by increased levels of certain greenhouse gases in the atmosphere

globalisation the increasing interconnection between countries, including economic, political and cultural exchange between countries all over the world

grasslands a biome of wide open spaces, where the vegetation is dominated by grasses; sometimes called a prairie, steppe or savannah

Green Revolution, the a period of research, development and alteration of agricultural techniques that took place between the 1940s and 1960s, most markedly in the developing world, which saw global increased agricultural production

Gross Domestic Product (GDP) the total monetary value of all the goods and services produced by a country over a specific time period (usually a year)

ground level photograph a photograph that is taken when the camera lens is level with the ground

H

historical (adjective) relating to past experiences and events

horizons layers that are formed in soil over time due to the gradual breaking down of rock into finer particles

hot spot a point not on a plate boundary where there is tectonic activity

I

Industrial Revolution, the a period of major socioeconomic change during the late 1700s and early 1800s, where agricultural and other manufacturing processes were revolutionised by the use of machinery

infrastructure the components necessary for any business or city, such as buildings, electricity, roads, airports and water supply

intensive farming a kind of farming that can supply large volumes of produce in a relatively small area (e.g. poultry or vegetable farms)

interconnection a key concept in geography: the relationship between all things, both animate and inanimate, and all processes, both natural and human

invasive alien species a plant, animal or other organism that is not native to an area, and whose introduction has negative effects on its new environment

irrigation the artificial supply of water to dry land to help in the growing of crops

L

leaching the draining away or removal of soluble substances

levee a floodbank or embankment that has been built to divert the flow of water or stop it overflowing

life expectancy the average number of years someone can expect to live based on statistics

line graph a graph that displays data as a line

lineal pattern a pattern with its features appearing in a rough line

location where things are located on the Earth's surface

M

map a simplified plan of an area shown from directly above the area

mental map a map that we keep in our heads, usually of our local area or places we are very familiar with, that allows us to navigate without a phone, GPS or hard-copy map

mountain vegetation vegetation that grows on the colder slopes of mountainsides

mulch decaying organic material such as leaves or compost that is spread over soil to insulate it and keep it warm and moist

multinational company (MNC) a company that operates in more than one country

N

natural regeneration a form of permaculture that allows continuous growth of trees on farmland, whereby the natural process of replacement or re-establishment of plants is encouraged

O

oblique aerial photograph a photograph taken from an aeroplane (or similar aircraft) where the camera is at an angle to the Earth's surface

organisation how and why things are arranged and managed on the Earth's surface by people

overfarming the process of growing the same crop or harvesting the same product (such as fish) in the same location year after year until the soil or water is depleted to such an extent that it can no longer provide the resource

P

permaculture the growing of a garden or maintenance of an ecosystem that uses the natural systems and resources of plants and animals to sustain itself, without harming the environment

place a key concept in geography: a part of the Earth's surface that is identified and given meaning by people

polar land very cold region that surrounds either the North or South Pole

political map a map that shows the locations and names of built features of the Earth, such as cities, roads, dams and railways

population density the population of a human habitat in terms of individuals per unit area (e.g. 1500 people per square kilometre)

population pyramid a graph that displays the population of males and females in a region by age group

prairie a biome of wide open spaces, where the vegetation is dominated by grasses; sometimes referred to as grasslands, steppe or savanna

precision farming system of farming that adapts modern technology to analyse aspects of the environment to bring out better economic and environmental outcomes

primary data data collected for a geographical inquiry by a person conducting an inquiry, such as survey data, hand-drawn maps or photographs

Q

qualitative data any information that can be recorded in words (e.g. Uluru is very large)

quantitative data any information that can be recorded as numbers (e.g. Uluru is 3.6 kilometres long)

R

radial pattern a pattern with its features spreading out like spokes on a wheel

rainfed agriculture that relies on rainfall for water

rainforest dense forest areas found in tropical areas with warm temperatures and heavy rainfall

raw material the basic organic resources from which things are made; often refers to the Earth's natural materials such as oil, wood, and water

refugee a person who moves to another country because of a natural disaster or to avoid persecution

reliability the confirmation that information is from a reputable, trustworthy source that can be verified as legitimate and accurate

S

salinity the amount of salt content in the soil

satellite image image of a place taken from satellites orbiting above the Earth's surface

savanna a biome of wide open spaces, where the vegetation is dominated by grasses; sometimes called a prairie, steppe or grasslands

scale a key concept in geography: the level at which a geographical inquiry takes place – personal, local, regional, national or global

scale (mapping) a line that indicates the distances on a map as represented in the real world

scatter plot a graph that shows two sets of data by plotted points along two axes, the pattern of which shows their correlation; sometimes called a scatter graph or scattergram

secondary data data collected for a geographical inquiry from other sources, such as textbooks, atlases and government websites

sediment solid particles that sink and settle at the bottom of water

silt fine sand rock, sand or clay particles that are carried by water and then deposited in another location

soil degradation the deterioration of soil condition caused by human activity, which results in a lowering of its levels of nutrients, quality and productivity

space a key concept in geography: the way things are arranged on the Earth's surface

spatial distribution the shapes and patterns in which things are arranged on the Earth's surface

spiritual (adjective) relating to a person's beliefs

steppe a biome of wide open spaces, where the vegetation is dominated by grasses; sometimes called a prairie, savanna or grasslands

subsistence farming type of farming whereby the yield of crops grown or raised by a farmer are just enough to cover their household needs

suburb an area beyond a city centre, with medium-density housing

supply chain the stages through which a product journeys, from its source to the consumer and finally its place of disposal

sustainability a key concept in geography: the ongoing capacity of Earth to maintain all life

T

tariff a tax or payment that a government places on imports or exports of a particular type of product or produce; used to restrict or control trade between countries

tectonic plate one of the immense, slowly moving pieces that make up the Earth's surface and carry the continents and oceans

temperate forest a large forest biome that experiences a range of seasonal climate conditions; lies between the tropics and the polar regions

terracing the process of cutting 'steps' into sloping land to make flat sections

topographic map a map that shows the shape of the land, its relief and landforms

tropical forest a biome that lies between the Tropic of Capricorn and the Tropic of Cancer, which has high regular rainfall, high average temperatures and a high level of biodiversity

tundra a biome that is characterised by having a vast, treeless environment across the Arctic region of Asia, Europe and North America

U

undernourished the state of not having enough food to develop or function adequately

upland rice growing the practice of growing rice on hillsides or mountainsides

urban a term used to describe a city or town

urban sprawl the growth of a city onto productive farming land on the city fringes

V

vertical aerial photograph photo taken from an aircraft in which the camera is pointed directly at (perpendicular to) the ground

W

water scarcity the lack of sufficient water to supply the needs of an area

water table the surface underground below which the ground is completely saturated with water

weathering wearing away by exposure to the Earth's elements

Glossary: History

A

Agricultural Revolution, the a period of agricultural development and advances in farming methods that took place in Britain from the mid-1600s until the late 1800s and paved the way for the Industrial Revolution

alliance system, the a series of agreements (alliances) formed between various European powers to work together to achieve shared goals; one of the factors contributing to the outbreak of World War I (*see also* Triple Alliance and Triple Entente)

American War of Independence, the a revolutionary war fought between Britain and the 13 British colonies in North America (1775–83); leading ultimately to independence and the formation of the United States of America

anarchism a social and political theory that all government and laws should be abolished and people should live in free communities where individuals govern their own behaviour

archaeology study of human history through the excavation of sites and the examination of physical remains

aristocracy a group of people who (through wealth or birth) belong to the upper class of a society or civilisation

armistice an agreement made by warring parties (e.g. countries) to stop fighting in order to negotiate peace

artefact any object that is made or changed by humans (e.g. a primitive tool, the remains of a building)

assassination the murder of a prominent political or religious figure in a surprise attack

assembly line machinery that is arranged in sequence so that something can be assembled quickly and efficiently

B

bias a prejudicial view or attitude towards someone or something that is not altered by the presentation of facts and evidence to the contrary

C

capitalism an economic system under which the means of production (e.g. factories, farms and machinery) are privately owned by individuals or corporations and run to generate profits, as opposed to state-owned and controlled systems such as socialism and communism; supporters are called capitalists

cause and effect a key concept in history: the link between what causes an action and the outcome of that action; an appreciation of the fact that events that take place (both short term and long term) are linked and can have impacts on people and places for many years to come

census a 'head count' or audit of the number of people living in a particular place at a particular time; information collected during a census can include age, occupation, income, religious beliefs etc.

Chartism a British working-class movement for political reform that took place in the 1830s; a People's Charter was drawn up in 1838 calling for a range of reforms to make the political system more democratic (including the right to vote for all men over the age of 21); supporters were called Chartists

chronology a record of events in the order they took place

circa a Latin word meaning 'around' or 'approximately' (abbreviated as '*c.*')

colonisation the process of setting up settlements in other lands by a country, kingdom or empire, often for reasons of trade or defence

colony an outpost set up by a country, kingdom or empire, often for social, financial or strategic (military) reasons

communism an economic system in which the means of production (e.g. factories, farms and machinery) are publicly owned (by the state) and goods are distributed equally according to need; as opposed to privately owned and controlled systems such as capitalism

conscientious objector in wartime, a person who is opposed to the war and refuses to perform military service because it goes against their beliefs, religion or conscience

conscription the compulsory enlistment of people to serve in the armed forces

Constitution the political principles on which a country or society is based and that guide its government; also, a written document that outlines these principles

contestability a key concept in history: an appreciation of the fact that some historians may challenge or dispute particular interpretations of historical sources, historical events or issues put forward by other historians

continuity and change a key concept in history: an appreciation of the fact that while some aspects of a society stay the same over time (continuity), others will develop and transform (change)

convict a person found guilty of a crime and sentenced by a court to serve some kind of punishment

corps a large grouping of troops within an armed force that performs a certain function (e.g. the Royal Australian Infantry Corps)

D

democracy a political system based around the idea that the citizens of a society should have control over the way in which they are governed

digger a miner, especially someone who digs for gold; also an informal term used to describe soldiers from Australia and New Zealand; first used during World War I

dispossession depriving a person or people of the possession or occupancy of land and property; when the British colonised Australia, large numbers of Indigenous Australians were dispossessed of their ancestral lands, hunting grounds and water resources; they were also cut off from their spiritual and cultural heritage as a result of dispossession

dogfight a close-range aerial combat between fighter planes

dominion a self-governing nation or state under British sovereignty in the later part of the 19th century and part of the British Empire; British dominions included former colonies such as Australia, Canada, India and New Zealand

dynasty a period of rule by members of the same family who come to power one after the other; power is often passed from father to son

E

emigration to leave one country or region in order to settle in another

empathy a key concept in history: the ability to understand another person's point of view, way of life, or decisions by considering their special circumstances and values

empire a group of countries and/or areas, often with different languages and having different cultures, ruled by a central power or leader (known as an emperor)

enclosures the act of seizing land (especially common farming land) by putting a hedge or other barrier around it; during the Agricultural Revolution over 4000 Enclosure Acts (laws) were passed by the British Parliament granting ownership of common farming land to private owners

enemy alien an immigrant from an enemy nation (during times of war) who had settled in Australia before the conflict broke out (e.g. people of German heritage already living in Australia during World War II became known as enemy aliens)

entrepreneur a person who sets up a business hoping to make a profit

evidence a key concept in history: the information or clues gathered from a historical source; evidence can be used to support a hypothesis (theory) or prove it wrong

extraterritoriality a principle where people abroad are subject to the laws of their own country rather than local laws

F

factory system, the a system of manufacturing goods on a large scale using many workers and specialised machinery located on a single site; first adopted in Britain during the Industrial Revolution

federation the process by which separate colonies or states form a unified nation with a central government; the Commonwealth of Australia was established in 1901 after the six colonies were joined

French Revolution, the a revolution in France started in 1789 that saw the overthrow of the monarchy and the establishment of a democratic system of government

H

hierarchy an organisation that ranks people one above the other depending on the power they hold

historical inquiry the process of examining historical evidence, conducting research and asking questions about it to find out about the past

hypothesis a considered opinion, theory or statement, based on research and evidence, about something that has not been proven

I

immigrant a person who enters a country to which they are not native in order to settle there permanently

immigration the act of entering and settling permanently in a country or region to which a person is not native

imperialism the process of gaining and maintaining control over other countries or territories for economic or strategic (military) reasons

Industrial Revolution, the the name given to the period of rapid development in manufacturing and industry from 1750 to 1900 particularly in Britain

industrialisation a process in which a society transforms from an economy based primarily on agriculture and farming into one based on manufacturing and industry

industrialist a person who owns or manages an industry

inflation a general increase in the prices of goods and services accompanied by a fall in the value of money or currency

intern to imprison or keep confined in a particular place

internment camp a prison camp set up to confine enemy aliens, prisoners of war or political prisoners

L

Luddite a member of a group of workers led by Ned Ludd who rioted and broke machinery from 1811 to 1818 in protest against loss of work due to the use of labour-saving machinery

M

migration the movement of people from one place to another

militarism a focus within a country on boosting the strength of the military by growing the armed forces and spending on military equipment

N

nationalism a sense of pride in, and love of, one's country; also the idea that one nation's culture and interests are superior to those of another nation

neutral nation a country that decides not to take part in a war or to favour one side or the other

New World a term used by Europeans from the late 1400s to describe the new lands being discovered around the world (particularly the Americas and later Australia)

no man's land an area of land between two opposing armies that is unoccupied or unclaimed

O

overseer a person who supervises workers, common in factories during the Industrial Revolution

P

pacifist a person opposed to violence and war

pastoralist a farmer of sheep or cattle, usually on a large-scale farm

penal colony a colony set up primarily to receive and contain prisoners from the home country

perspectives a key concept in history: a point of view about an event or issue; a person's perspective is often influenced by their knowledge, culture or beliefs

plebiscite a direct vote by all electors in a country, city or state on an specific and important issue

primary source a source that existed or was made at the time being studied

propaganda information or material that attempts to influence the behaviour or opinions of people within a society; it can take many forms (e.g. posters, flyers, films) and is designed to promote a particular cause or course of action and/or damage the cause of an enemy

R

referendum (in Australian history) a national vote of the people on actions proposed by the government; any proposed changes to the Australian Constitution must be put to a vote in a referendum

reparations money paid by one country to another as compensation for damage, injuries and deaths it has caused during war

representative democracy a system of democratic government in which certain people are elected by the public to represent their interests in parliament

S

secondary source a source created after the time being studied

separation of powers a principle that guides the way Australia is governed; the power to govern is divided between the parliament, the executive and the judiciary to avoid one group having total control; each branch of government works within defined areas of responsibility and keeps checks on the actions of the other branches

significance a key concept in history: the importance given to a particular historical event, person, development or issue

slave a person who is the legal property of another person and who is forced to work for that person without pay

slavery the practice or system of owning slaves

social Darwinism the theory that persons, groups and races in society are subject to the same laws of natural selection as plants and animals in nature; based on a theory proposed by Charles Darwin in the mid-1800s (*see* Darwinism)

socialism an economic and political system under which the means of production (e.g. factories, farms and machinery) are publicly owned and resources are allocated to the people according to need; as opposed to privately owned and controlled systems such as capitalism

society a community of people living in a particular area who have shared culture, customs and laws

source any item (e.g. artefact, building, document) that has been left behind from the past; historical sources can be divided into two categories depending on when they were created (see primary source and secondary source)

suffragette a woman seeking the right to vote through organised campaigns and protests

T

tariff a tax (usually applied to goods being imported or exported)

timeline a visual representation showing a sequence of related historical events in chronological order

trade union an organised group formed by workers to protect their rights and ensure that their interests are taken into account by company owners and governments

Treaty of Versailles, the the treaty (binding agreement) that ended World War I and forced Germany to accept responsibility for starting the war and to pay reparations

trench the extensive system of ditches used in World War I to move troops and shelter them from enemy gunfire, as well as a place from which to fire on the enemy

Triple Alliance the alliance formed between Germany, Austria–Hungary and Italy from 1882 to 1915

Triple Entente the alliance formed between Great Britain, France and Russia that formed the basis of the Allied Powers during World War I

U

urban planning carefully planned development of cities, in comparison to haphazard expansion

urbanisation a term used to describe the increase in the numbers of people living in urban areas (i.e. cities) versus rural areas (i.e. farms)

W

welfare state a system whereby a nation attempts to ensure that all citizens, including the poorest, have their basic needs met through health care, education, housing and pensions

White Australia Policy, the a series of government policies introduced after Federation in 1901 that prevented 'non-white' immigrants from settling in Australia, favouring instead those from certain European nations (especially Britain); these policies were progressively overturned between 1949 and 1973

workhouses public institutions for the very poor, who received food and lodging in return for work

Z

zeppelin an airship with a rigid frame filled with gas; commonly used across Germany to transport goods and people in the early 20th century

Glossary: Economics and business

A

allocation a key concept in economics and business: the way scarce resources are distributed among producers, and how scarce goods and services are divided among consumers

ATM automatic teller machine used to make banking transactions

Australian Competition and Consumer Commission (ACCC) a body that promotes competition and fair trade in markets to benefit consumers, businesses, and the community

Australian Securities Exchange (ASX) a public company that operates Australia's primary securities exchange. Shares are one form of security that can be traded via the ASX.

automation when work once completed manually is replaced with automatic equipment in manufacturing or other production process

B

borrowing to take money from a bank or financial institution with the intention of paying it back over a period of time with interest

business processes a series of tasks or actions that are undertaken by a business to produce its product

C

capital resources inputs from man-made goods, such as machines or computers, that are used to produce further goods and services

capitalism a set of economic and political ideas stating that private individuals should own productive resources such as land and capital from which they can earn profit

competitive advantage when a business is able to outperform similar businesses in a market. The ability to outperform may be due to factors such as skilled personnel, the ability to reduce costs and ability to improve quality.

compound interest interest that is earned from a deposit or loan is added to the original deposit or loan. This added interest also earns interest in the future.

consumer an individual who purchases goods or services for personal use

cost–benefit analysis estimating what will need to be paid (costs) and possible profits (benefits) derived from a business proposal

crowdfunding when a large number of people, usually via the internet, fund a project or venture by providing small sums of money

D

debt sum or money that is still owed

deficit budget when government revenue is less than government expenditure

deposit sum of money paid into an account

dismissal an employer terminating an employee's employment against their will

E

earn money obtained in return for labour or services

economic performance a key concept in economics and business: how well an economy is performing, measured by whether it is achieving its economic objectives

economics the study of how people produce, consume and share wealth

economies of scale producing larger quantities of a good or service that results in reduced unit costs of production

economist an individual who studies the relationship between the resources that a geographic area (a country for example) has and what it is able to produce

economy a system that involves the production, distribution, trade and consumption of goods and services by individuals, businesses, organisations or governments

EFTPOS fees Electronic Funds Transfer at Point of Sale (EFTPOS) involves the transfer of funds electronically from debit or credit cards to pay for goods and services in order to complete a sale. Fees or charges may be associated with these electronic transfers.

employee an individual who is hired to perform specific tasks in return for monetary payment

employer business or organisation hiring worker/s to perform specific tasks in return for payment

enterprise agreement

1 an agreement made directly at the enterprise level between employers and employees about wages and working conditions

2 improving a company's ability to make decisions about their workforce in relation to employee wages and conditions

enterprising demonstrating initiative and willingness to undertake new projects

equities shares in a company – the shareholder holds equity or a stake in the company

exception fees charges on an account for what a financial institution considers to be unusual transactions such as exceeding a credit card limit

expenditure the amount of money spent by a person or government

F

Fair Work Australia Fair Work Australia was renamed the Fair Work Commission in 2012, *see* Fair Work Commission

Fair Work Commission Australia's national workplace relations tribunal. It carries out a range of functions concerning working conditions and resolution of workplace disputes.

financial planner a professional who assists customers with planning their finances

fixed interest an interest rate on a loan or mortgage that remains the same for the term of the loan or part of its term

G

globalisation the process that involves all the countries of the world being linked together, resulting in an exchange of views, ideas, products and culture

goods and services products made for consumers. Goods are tangible products that can be touched, such as bread. Services are intangible products that cannot be touched but benefit the consumer in some way, such as tutoring.

Goods and Services Tax (GST) a tax added to the value of some goods and services. Currently in Australia the tax is 10% of the value of goods and services sales.

Gross Domestic Product (GDP) the total market value of all goods and services produced within Australia in a given time frame

H

hard skills skills that are teachable and can be measured such as writing, reading and using a computer

I

import quotas a physical limit placed on the quantity of an imported good that can enter the country

industrialised a country or region that has developed industries on a wide scale, *see* industry

industry the productive activity of manufacturers or businesses that are involved in the process of making goods and services

inflation when the general level of prices paid for goods and services over a certain period of time increases

innovation a new idea or more effective product or process that makes the product better than ever before

insurance a guarantee that there will be compensation for loss, damage, illness or death should it occur in the future in return for a specified payment

interdependence a key concept in economics and business: the way in which participants in the economy, such as producers and consumers, rely on each other to produce and consume goods and services

interest (on a loan) money paid at a particular rate for the use of money lent

interest rates the amount a borrower must pay to a lender for the use of assets such as money – usually expressed as a percentage of the total amount borrowed

Internet banking fees fees that may be associated with banking online

investing putting money into shares, property or other financial schemes in the hope of making a profit

investment risk the likelihood of losing money on a financial scheme

L

labour resources inputs from human effort (physical and/or mental) used in the production of goods and services

liquidation when a company or part of a company is put out of business and assets and property of the company are redistributed to shareholders

living standards a key concept in economics and business: the level of wealth, material goods, comfort and life necessities available to people living in a geographical area

M

making choices a key concept in economics and business: considering alternatives to make the best decision, weighing up costs and benefits of each potential course of action

market a key concept in economics and business: the organised exchange of goods, services or resources between buyers and sellers

market capitalist economy an economic and political system where private individuals are the producers who exchange goods and services with consumers and in return keep the profit

market socialist economy an economic and political system where the exchange of goods and services takes place via a market where consumers and producers exchange goods and services. The government/state predominantly owns the productive resources used to make goods and services.

marketing activities that convey the value of a good or service to a customer in order to increase sales

material living standards standards that can be easily measured in terms of income per person, or consumption or purchase of goods and services

modern award a legal agreement that sets out minimum pay and other employment conditions

N

natural resources inputs from nature such as water, forests and fertile land used in the production of goods and services

non-material living standards standards that are not easily measured as they are intangible, and refer to the qualitative aspects of our lives, such as enjoyment of nature and feeling safe in the community

O

opportunity cost the cost of the next best alternative use of resources

P

per annum per year

Personal Identification Number (PIN) a numerical password used to make sure a user is the owner of their financial account

planned capitalist economy an economic and political system where individuals own the resources used to produce goods and services but the government or state dictates what will be produced, how it will be produced and who it will be distributed to

planned socialist economy an economic and political system where the government or state predominantly owns the resources and also decides what to produce, how to produce and who it will be distributed to

portfolio a collection of assets such as shares, property or interest-earning deposits held by a private individual or institution

positioning a marketing strategy that creates a unique position for a product compared with similar products on the market

primary product a product that exists in its natural state and has not been used to make other goods and services

principal money that was originally invested or loaned

product an item (either a good or service) that is offered for sale

profit the difference between what was earned and what was spent in order to buy, operate or produce something

property real estate that has been purchased with the intention of earning a return on the investment

R

registration fees an annual charge for having a vehicle, pets, etc. registered

revenue income a business receives from its business activities such as the sale of goods and services to customers

risk the likelihood of loss

S

savings account a bank account specifically for the purposes of depositing money and earning interest

scam a scheme that is deliberately dishonest

scarcity a key concept in economics and business: having limited resources to achieve unlimited needs and wants

segmentation dividing into parts

service sector companies, business and government enterprises that provide intangible goods that benefit the consumer such as tutoring, accountancy, hairdressing and legal advice

sharemarket a market in which shares in publicly listed companies are bought and sold

shares a unit of ownership in a publicly listed company

simple interest multiplying the interest rate by the principal (money originally deposited or loaned) and then multiplying by the number of periods

skimming capturing a victim's personal information, such as credit card details, using an electronic method

small business according to the Australian Bureau of Statistics a small business is one that employs fewer than 20 people

socialist economy an economic system where the state or government predominantly owns the productive resources used to make goods and services

soft skills the personal qualities that allow a person to effectively interact with other people in a harmonious manner

specialisation a key concept in economics and business: focusing on the production of a particular good or service in order to produce it more efficiently

spend paying out money to buy goods or services

stamp duty tax on the cost of property

subsistence economy an economic system where people produce enough for their own needs through methods such as hunting, gathering and farming. Money is not used.

superannuation saving for retirement – contributions are made by the employer and employee

T

tariff a tax on imported goods and services

trade a key concept in economics and business: buying, selling or exchanging goods or services between people, countries, etc.

transaction account a deposit account held at a bank or other financial institution. Money can be withdrawn on demand.

W

warranty a written guarantee to the purchaser to repair or replace the purchase if necessary within a specified time

Glossary: Civics and citizenship

A

accused a person who has been charged with or arrested for allegedly committing a crime

Acts laws made by parliament. Also referred to as legislation or statutes.

asylum protection by a nation to a person who has left their native country as a political refugee

asylum seeker a person who seeks protection as a refugee and is still waiting to have his/her application for refugee status assessed

B

bilateral where a treaty exists between Australia and one other country

C

candidate a person standing for election

citizen a person who is a member of a certain country or city, who is granted certain rights and privileges because of this and is expected to act responsibly

citizenship the legal status of being a citizen, granted by birth or naturalisation, giving the citizen certain rights and responsibilities

civics the study of government and the rights and duties of citizens

civil case a legal dispute where an individual alleges another has breached their rights

coalition elected individuals or parties who have united to achieve a specific purpose

common law laws made by judges or the courts

constitution a set of laws by which a country or state is governed

court hierarchy a ranking of courts from lowest to highest in order of the seriousness of the type of case they can determine

criminal case a legal dispute in which an individual (referred to as the accused) who has committed an illegal act that inflicts harm on another individual and/or society, is taken to court (or prosecuted) by the state or government.

D

damages a civil remedy where the court orders the defendant to pay an amount of money to the plaintiff (that is, the person whose rights have been breached)

defamation a type of civil action where one party makes false statements that causes another party to lose their reputation

democratic values a key concept in civics and citizenship: the beliefs and ideals that are held by our society as a democracy

democracy a key concept in civics and citizenship: a system of government in which the people have the power to determine how they will be ruled or managed and so elect a parliament to make and implement laws on their behalf

discrimination treating, or proposing to treat, a person or a group of people unfavourably because of personal characteristics such as age, race, disability, physical features or political beliefs

diversity having many different forms. When referring to people, it means that people come from different racial, ethnic, socioeconomic, geographic, educational or professional backgrounds

E

electorate a designated geographical area that is represented by an elected member in parliament

F

federal system a system of government where, for the purposes of governing and law-making, the nation has one central parliament (with the power to make laws for the entire nation) and numerous state parliaments (each of which with the power to make laws for the residents of their state)

G

global citizen a person who identifies as being part of the world community and acts according to and seeks to build world community values and practices

government the elected members of parliament who make decisions for a nation or state. The government is made up of the party or coalition that has won a majority of seats in the lower house of parliament. The lower house of federal parliament is the House of Representatives. The lower house of the Victorian state parliament is the Legislative Assembly.

Governor-General the Queen's representative in Australia

guilty a verdict in a criminal case where the accused is found to have committed an offence. Also referred to as a conviction.

H

House of Representatives The lower house of the Commonwealth parliament

house of review term often used to refer to the Senate in its role as reviewing legislation that has come from the House of Representatives.

human rights rights that all human beings possess whatever their nationality, place of residence, sex, national or ethnic origin, colour, religion, language, or any other status

I

indictable offence a serious offence heard before a judge and jury

J

judge the person who presides over the Western Australian District and Supreme Courts (General Division)

judiciary the courts

jurisdiction the power or authority of a court to hear a particular type of legal dispute

jury the group of randomly selected citizens who are called to determine the verdict in a criminal (and sometimes civil) trial

justice a key concept in civics and citizenship: the idea that people should treat each other with fairness and respect

justice system a range of organisations or bodies that make and enforce the law including the courts, parliaments, police and prisons. Also referred to as the legal system.

L

laws formal 'legal rules' that are designed to govern the way in which people behave and act so we can all live together in one peaceful and united society

legal dispute an argument or disagreement between two or more parties to be resolved by the legal system

legal principle the legal reasoning behind a judge's decision that must be followed by magistrates and judges in lower courts, in the same hierarchy, in cases where the facts are similar

legal system a range of organisations or bodies that make and enforce the law including the courts, parliaments, police and prisons. Also referred to as the justice system

legislation a law made by parliament. Also referred to as an Act of Parliament or statute.

liberal democracy a system of government that aims to protect individual rights and freedoms and place limits on the level of government control or interference

M

Magistrates' Court the lowest ranked court in Victoria that generally hears minor legal disputes

majority rule the party or coalition that has won the majority of seats rules, usually determined by 50 per cent plus one

N

negligence a type of civil action where one party causes harm through failure to uphold a reasonable duty of care to a 'neighbour'

non-legal rules regulations made by private individuals or groups that only apply to the members of that particular group

not guilty the verdict in a criminal trial where the accused is found to have not committed the crime. Also referred to as an acquittal.

O

opposition the second largest political party, or coalition of parties, after the government party in the lower house of parliament, that works to scrutinise and oppose government policies

P

parliament the national or state law-making body that is made up of elected representatives in both the upper and lower house with a head of state. In Australia the national parliament is referred to as the Commonwealth or federal parliament. It is also a body or group of people elected by other citizens to make laws on their behalf.

parliamentary democracy a system of government where people elect representatives to parliament in order to make laws which reflect the majority of voter's views

participation a key concept in civics and citizenship: the way in which citizens contribute to the running of society, such as by voting in an election

plaintiff the party that initiates or commences a civil action against another party

plea a statement given by an accused person indicating their desire to be treated as being either guilty or not guilty at a court hearing or trial

pluralist society a diverse society where there is tolerance of different beliefs

policy a statement of principles and aims that will shape future decision-making

political system a structure that determines who has power to make decisions for members of a state or country

preamble a short introduction commonly provided at the beginning of an Act of Parliament (or a Constitution) that explains its broad aims and objectives

precedent a legal principle that must be followed by magistrates and judges in lower courts, in the same hierarchy, in cases where the facts are similar

preferential system a voting system in which the voter numbers their preferences for candidates. If no candidate receives more than half of first preference votes the next preferences of votes for the least successful candidates are distributed until candidate or candidates are elected.

presumption of innocence a legal principle that requires an accused person to be treated as if they were innocent until they have been proven guilty

prosecuted an accused person being taken to court by the state or government on behalf of society

prosecution the party (i.e the state or government) that initiates a criminal action or takes an accused person to court on behalf of the victim and society

proportional representation proportional representation is a voting system used in the senate. Each candidate must achieve a quota determined by adding one to the total number of vacancies to be filled and then dividing this number by the total number of formal votes and adding one.

Q

quota the number of votes a candidate must receive before they are elected

R

reasonable grounds the requirement that a dissatisfied party can have the decision of a court reviewed if rational and justifiable reasons exist. For example, the dissatisfied party can make a rational argument that the sentence imposed was too severe compared to previous similar cases.

referendum the process for changing the wording of the Australian Constituation. This requires a proposal for change to be passed by both houses of Commonwealth parliament and a large proportion (i.e a double majority) of Australia voters.

refugees someone who has been assessed as having been forced to flee their country due to war, persecution, or natural disaster

remedy an outcome of a civil dispute aimed at restoring the plaintiff, as far as possible, to the position they were in prior to the breach of rights

representative democracy a system of government in which the people vote to elect the parliaments and governments that make and implement the law

republic a system of government where the people vote to determine the government (or Head of State) rather than being governed by a hereditary monarch or Crown (e.g. a King or Queen)

responsibility a key concept in civics and citizenship: our duty as citizens to contribute to society

right a key concept in civics and citizenship: freedom and fair treatment granted to us as citizens

rule of law the principle that the laws apply equally to all individuals and organisations throughout a nation and must be upheld by all. The rule of law also means that the law can only be enforced and altered by those with the legal authority to do so.

S

sanction a penalty imposed on a person who has breached a criminal law (e.g. a fine or imprisonment)

Senate the upper house of the federal parliament of Australia has 76 senators, 12 from each of the six states and two each from the Northern Territory and the Australian Capital Territory

senators individuals elected to the upper house of the federal parliament (i.e. the Senate)

statutes laws made by parliament. Also referred to as Acts of Parliament or legislation.

statutory authorities a body that parliament gives the power to make laws on their behalf (e.g. local councils and VicRoads)

summary offence a minor offence heard and determined in the Magistrates' Court

Supreme Court of Appeal the court that hears appeals or reviews cases from the County and Supreme Courts

T

trial a hearing to resolve and determine the outcome in a criminal or civil dispute heard in the County or Supreme Courts

U

United Nations an international organisation formed in 1945 with the aim of increasing political and economic cooperation among member countries

upper house the second chamber of a two-chamber parliament. The Senate is the upper house in the federal parliament and the Legislative Council is the upper house of the Victorian state parliament.

V

verdict the decision made by a magistrate, judge or jury in a court hearing or trial

W

Westminster system a key concept in civics and citizenship: the parliamentary system of Great Britain where parliament consists of two houses and the Crown. It is the parliamentary system used in Australia

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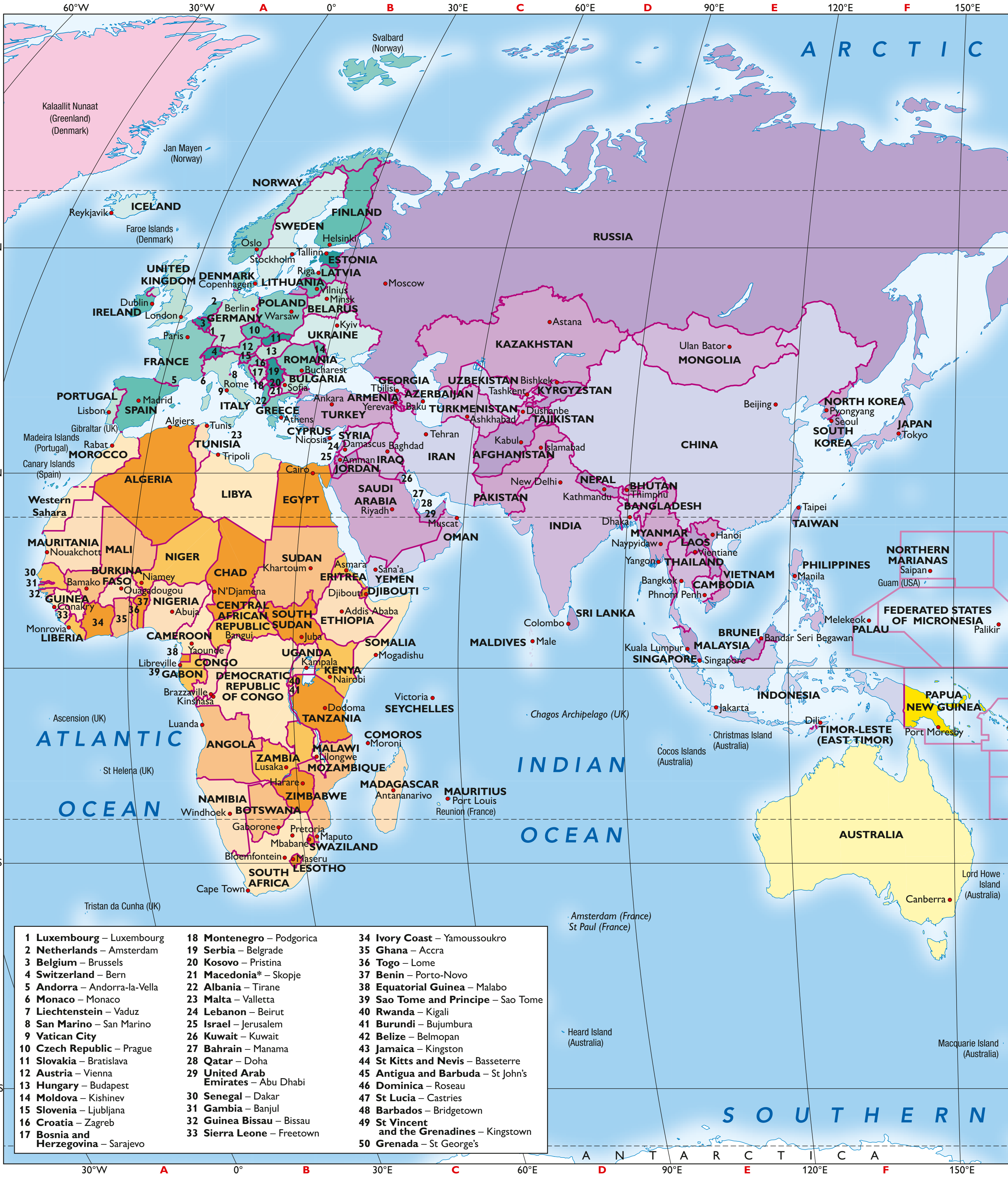
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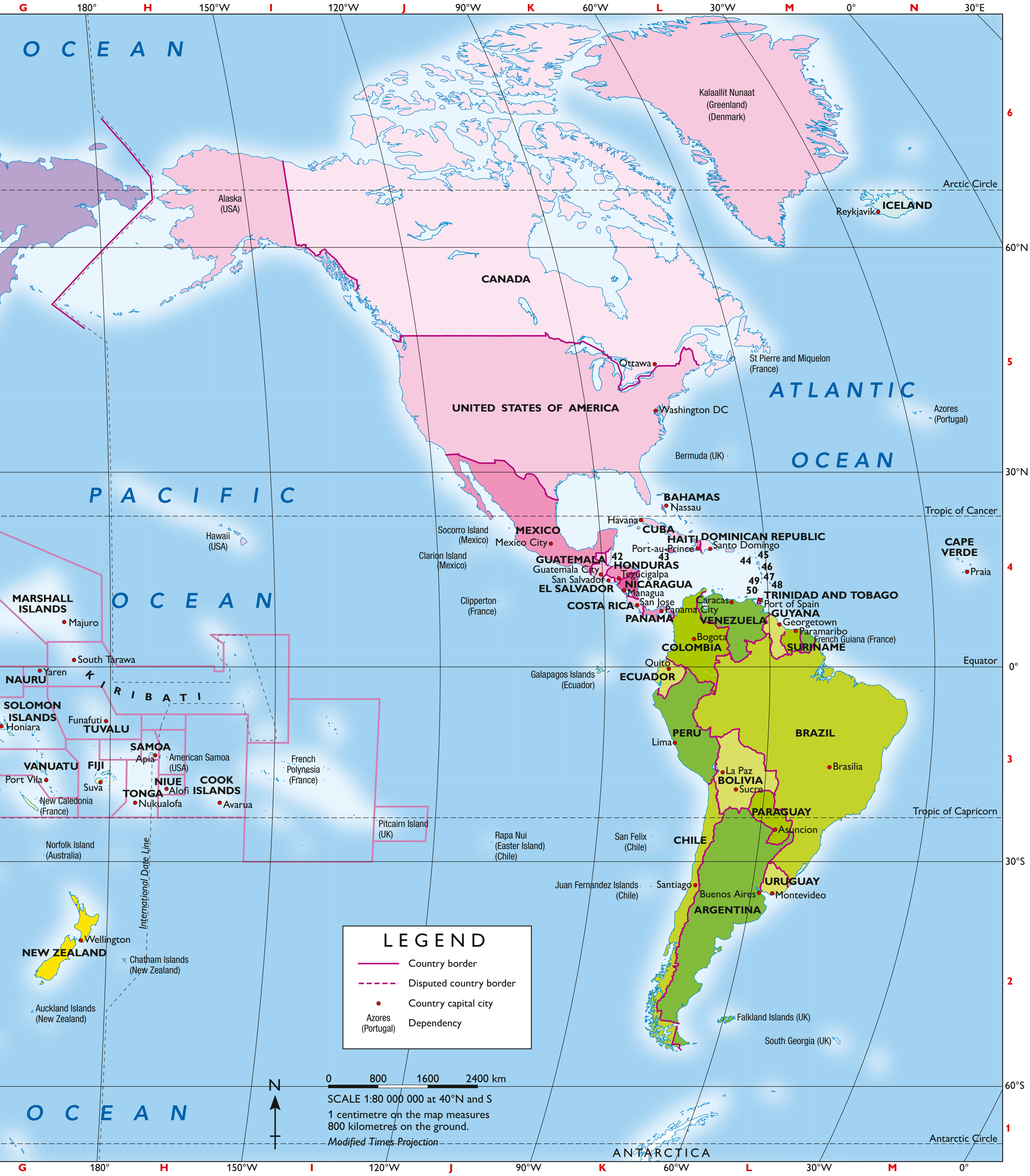
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OCEAN
Kalaallit Nunaat (Greenland) (Denmark)
6
Arctic Circle
Alaska (USA)
ICELAND
Reykjavik
60°N
CANADA
5
Ottawa
St Pierre and Miquelon (France)
ATLANTIC
UNITED STATES OF AMERICA
Washington DC
Azores (Portugal)
Bermuda (UK)
OCEAN
30°N
PACIFIC
BAHAMAS
Nassau
Tropic of Cancer
Havana
CUBA
Hawaii (USA)
Socorro Island (Mexico)
MEXICO
Mexico City
HAITI
DOMINICAN REPUBLIC
Port-au-Prince
Santo Domingo
CAPE VERDE
Clarion Island (Mexico)
GUATEMALA
42
43
44
45
46
47
48
49
50
HONDURAS
Guatemala City
Tegucigalpa
4
Praia
San Salvador
NICARAGUA
EL SALVADOR
Managua
MARSHALL ISLANDS
OCEAN
Clipperton (France)
TRINIDAD AND TOBAGO
Caracas
COSTA RICA
San Jose
Port of Spain
Panama City
GUYANA
Majuro
PANAMA
VENEZUELA
Georgetown
Paramaribo
Bogota
French Guiana (France)
COLOMBIA
SURINAME
South Tarawa
Quito
Equator
0°
Yaren
NAURU
KIRIBATI
Galapagos Islands (Ecuador)
ECUADOR
SOLOMON ISLANDS
Funafuti
Honiara
TUVALU
PERU
BRAZIL
SAMOA
Lima
Apia
American Samoa (USA)
French Polynesia (France)
3
VANUATU
FIJI
La Paz
Brasilia
Port Vila
NIUE
COOK ISLANDS
BOLIVIA
Suva
Alofi
Sucre
New Caledonia (France)
TONGA
Nukualofa
Avarua
PARAGUAY
Tropic of Capricorn
Pitcairn Island (UK)
Asuncion
Rapa Nui (Easter Island) (Chile)
San Felix (Chile)
CHILE
Norfolk Island (Australia)
30°S
International Date Line
Juan Fernandez Islands (Chile)
Santiago
URUGUAY
Buenos Aires
Montevideo
ARGENTINA
Wellington
NEW ZEALAND
Chatham Islands (New Zealand)
LEGEND
Country border
Disputed country border
Country capital city
Azores (Portugal)
Dependency
2
Auckland Islands (New Zealand)
Falkland Islands (UK)
South Georgia (UK)
0
800
1600
2400 km
60°S
N
SCALE 1:80 000 000 at 40°N and S
1 centimetre on the map measures 800 kilometres on the ground.
Modified Times Projection
OCEAN
1
Antarctic Circle
ANTARCTICA
G
180°
H
150°W
I
120°W
J
90°W
K
60°W
L
30°W
M
0°

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